TEXT FLY WITHIN
THE BOOK ONLY

UNIVERSAL
LIBRARY

THE COST OF LIVING IN THE UNITED STATES, 1914–1929

OTHER COST OF LIVING STUDIES

PUBLISHED BY THE

NATIONAL INDUSTRIAL CONFERENCE BOARD, INC.

247 Park Avenue, New York

	Cloth Bound
The Cost of Living in the United States, 1914–1926	$3.00
The Cost of Living in the United States, 1914–1927	2.50
The Cost of Living in Twelve Industrial Cities	1.50
The Cost of Living in New York City	2.00
The Cost of Living in the United States in 1928 (*Paper Bound*)	.50
The Cost of Living in the United States, 1914–1929	2.50

Complete list of publications sent on request

THE COST OF LIVING IN THE UNITED STATES 1914–1929

NATIONAL INDUSTRIAL CONFERENCE BOARD, Inc.
NEW YORK
1930

PREFACE

FROM the outset of its career, the National Industrial Conference Board has been closely identified with studies of the Cost of Living. It was moved to give its attention to this subject by the rapid rise in prices of commodities which followed the beginning of the World War. The consequent rising cost of living for industrial wage earners caused considerable concern not only among the latter, but also among employers.

The difficulties of the situation were enhanced by the lack of precise information regarding the degree in which living costs had changed. It was to supply this information that the National Industrial Conference Board undertook in 1918 to determine, with reference to conditions immediately before the War, the periodic change in the cost of living of wage earners on the basis of the entire expenditure of workers' households. This was the beginning of a series of publications, of which the present volume, "The Cost of Living in the United States, 1914-1929," is the most recent.

As time has progressed, the Conference Board has, without disturbing the continuity of its series, gradually improved its methods and elaborated the scope of its investigations. A thorough revision of its procedure affecting many details of its work was undertaken and is reviewed in Chapter II of the present volume. In view of changing conditions in economic life and the progress of research in this field, no inflexible system of procedure could in the long run be satisfactory. Methods and processes must be under constant scrutiny, and ways and means must be found to adapt them to new conditions as they arise.

The Conference Board has not confined its attention to recording cost of living changes in the United States. It has studied the procedure and results of similar studies elsewhere, and has presented in "The Cost of Living in Foreign Countries" (1927) a comprehensive study of its investigations. It has, moreover, made at various times studies of

the cost of living in different localities, the most recent of which is entitled "The Cost of Living in Twelve Industrial Cities" (1928).

In view of the broad scope of the Conference Board's work in this field, it has seemed desirable in the present volume to discuss the cost of living not only from the standpoint of changes since 1914, but also from those other aspects of the cost of living which have engaged the attention of the Board and of other investigators.

In the preparation of its studies the National Industrial Conference Board avails itself of the experience and judgment of the business executives who compose its membership, and of recognized authorities in special fields, in addition to the scientific knowledge and equipment of its Research Staff. The publications thus finally represent the result of scientific investigation and broad business experience, and the conclusions expressed therein are those of the Conference Board as a body.

This volume is a result of an investigation conducted by Miss M. Ada Beney, and assistants, of the Conference Board's Research Staff, under the supervision of the Staff Economic Council.

MAGNUS W. ALEXANDER
President

New York
April, 1930

CONTENTS

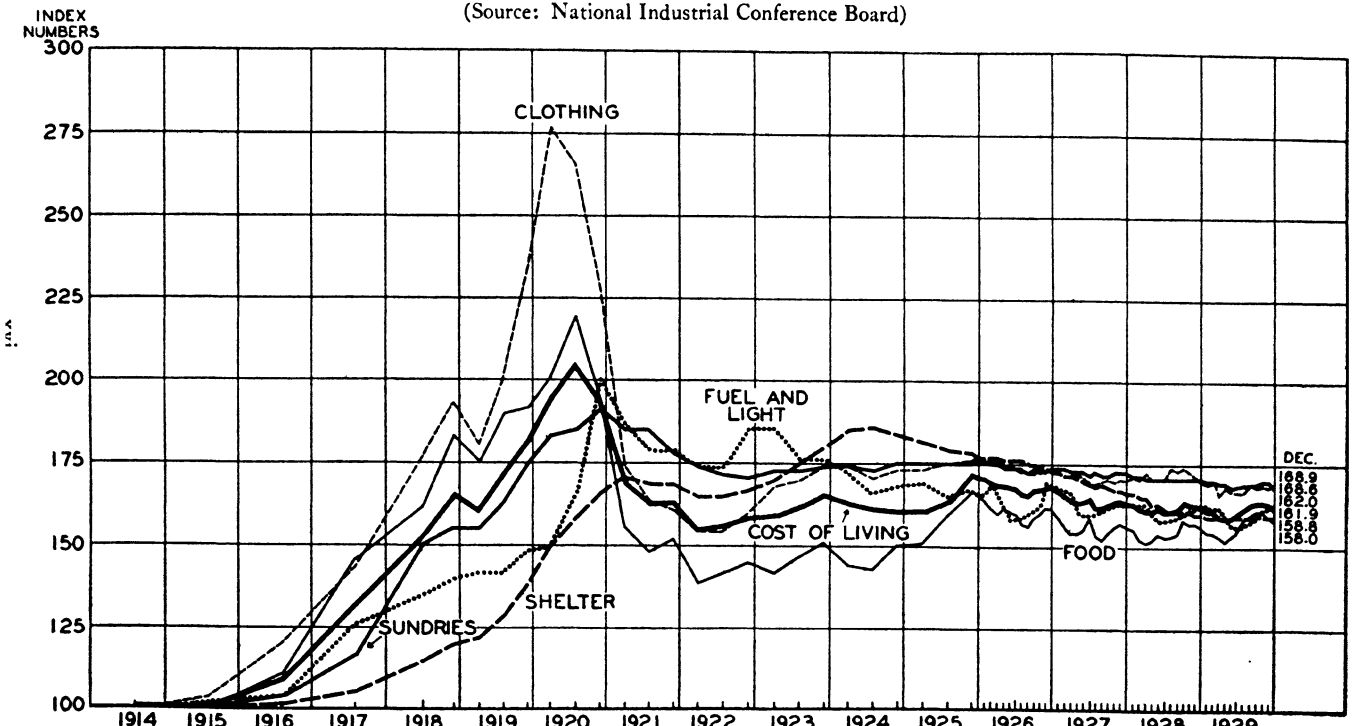
LIST OF TABLES

LIST OF CHARTS

CHART 1: INDEXES OF THE COST OF LIVING IN THE UNITED STATES, JULY, 1914 TO DECEMBER, 1929

Base, July, 1914 = 100

(Source: National Industrial Conference Board)



THE COST OF LIVING IN THE UNITED STATES, 1914–1929

INTRODUCTION

PROBABLY no factor in our economic life has such general importance as the cost of living. Consequently, questions relating to living costs continuously engage the attention of economists and arouse the interest of both employers and wage earners. Inquiries have been made as to how people spend their incomes, or, in other words, what goods and services they must or do buy, and what importance each item has in the total expenditures. Consideration has also been given to the question of the extent to which expenditures or standards differ among various social groups. Studies relating to budget aspects of these problems were made many years ago and are still being conducted. Other phases of living costs have also been studied, especially since the World War. These are changes in living costs that occur during the course of time, due particularly to changes in retail prices. Studies of this type are the outgrowth of the rapid rise of prices during and immediately after the War. Considerable economic distress was caused by the effect of this increased price level upon the cost of living in so far as incomes were not correspondingly increased. There was much discussion of the "high cost of living," but a lack of data to indicate how "high" living costs really were. In order to provide for a more accurate measurement of changes in living costs, particularly for the adjustment of wages, the compilation of cost of living index numbers was started in the United States as well as in many foreign countries.

Late in 1917 the United States Bureau of Labor Statistics conducted investigations in the principal shipbuilding centers to determine whether there had been a material increase

in the cost of living. These inquiries were made in consequence of an agreement between the Shipbuilding Wage Adjustment Board of the Emergency Fleet Corporation and the unions which provided for a readjustment of wages on the basis of the cost of living. Accordingly, expenditures in 1917 or 1918 of families in thirty-five communities were ascertained, and the increases from year to year during the period of 1914 to 1918 were computed on the basis of prices collected from local merchants. These local estimates were not combined into an index for the country as a whole, however, although eighteen of them later served as a temporary basis for the Bureau's index of the cost of living.

The first estimate of changes in the cost of living for the United States as a whole, based on retail prices representing a complete budget and weighted according to family consumption, was made by the National Industrial Conference Board in June, 1918.[1] This estimate was designed to provide the measurement of changes in the cost of living desired by the employer members of the National War Labor Board, and to meet the needs of industry in general. This report presented the results of the Board's researches into all available material that would provide a fair estimate of changes in the living costs of wage earners' families between July, 1914 and June, 1918 at the same standard of living on both dates. The data were somewhat fragmentary but were supplemented by information secured by means of questionnaires relating to the cost of clothing, fuel and rents. In November, 1918, a more systematic collection of data was undertaken, and since then, with subsequent improvements in method, the Conference Board has continued its investigations in this field.

The compilation of indexes of changes in the cost of living is by no means a simple problem. Many questions must be decided before a scientific index is finally available which will be indicative of the changes that occur. It is the aim of this volume to describe the several phases of living costs studied, to discuss the numerous problems involved, and to give an account of various studies illustrative of the different

[1] National Industrial Conference Board, Research Report No. 9, "Wartime Changes in the Cost of Living," Boston, 1918.

types of measurements, showing both the methods used in carrying on the investigations and the results secured. Some of these studies will be described in more detail than others, and since the chief purpose of this volume is to present the annual statements relating to the findings of the Conference Board's cost of living investigation, the method of computing this index and the results secured will be presented in greater detail than for the other studies.

CHAPTER I

MEASUREMENTS OF THE COST OF LIVING

TO the person unfamiliar with the various aspects of so-called "cost of living" measurements, the term "cost of living" generally suggests actual dollar and cents expenditures for the necessities of life. When such a person encounters a "cost of living index," as published, for example, by the United States Bureau of Labor Statistics or by the National Industrial Conference Board, he is somewhat mystified as to the meaning of this figure and discredits it because it does not tell him what he expects to find, namely, how much money is actually required to cover living necessities.

Misunderstanding bred by a lack of a clear comprehension of the various aspects of cost of living measurements is quite common. It appears desirable, therefore, to point out first the various phases of living costs which may be measured and to indicate their interrelationship before discussing the problems connected with such measurements.

Types of Measurements

Interest in cost of living studies may be focussed on several aspects. Facts might be desired about how much it actually costs to live, in which case the answer would be in money values. But this immediately raises basic questions in regard to the standard of living, the number of persons covered, the time and the place, since all of these factors influence living expenditures. On the other hand, the interest might be in the changes or differences in living costs. In this case the information desired might be expressed in dollars and cents, but it is more convenient in the form of an index. Such comparison may show changes from time to time or differences between places or between social groups.

Actual Costs

One type of measurement of the cost of living is that showing how much money is required to live according to the average standard of living among the type of persons whose living costs are to be studied. This may be done in two ways. It may take the form of a so-called budget investigation, in which a number of persons belonging to the social class under consideration are requested to state how much they actually spent during a given time and for what articles or services such expenditures were made. They may comply with this request either by drawing on their memory or else by actually recording their expenditures each day. The latter method is, of course, by far the preferable. This type of study takes account of differences not only in prices but also in the standard of living.[1] The other method of determining actual costs is to set up a definite budget to represent family expenditures, i. e., make up a list of commodities or services which the average family[2] generally buys. Such a budget may be based upon the information secured by some previous budget study or upon an arbitrary judgment as to what constitutes family expenditure. With such a budget as a basis, it is possible to ascertain the prices that would have to be paid for each budget item and by multiplying the prices by the quantities of each used, the total expenditure could be found. In both cases the result would be expressed in terms of money.

Time Comparisons

When interest in living costs is fixed on comparisons either in time, between places or between social groups, such comparisons, particularly time series, are generally expressed in the form of index numbers, the nature of which will be subsequently described.[3] Comparisons may be expressed in money terms, but the significance of the figures is more easily seen in relative figures.

Most cost of living index numbers published throughout the world are primarily time series. These indexes take some

[1] See, also, pp. 10–12 of this volume.

[2] It need not be a family, as such a study may be made for one or more persons.

[3] See pp. 25–30 of this volume.

period of time—a month, a year or some other unit of time—and show how much living costs have increased or decreased during that period. Such changes in living costs are generally determined on the basis of price changes of household commodities and services and take no account of changed standards of living. Indexes showing time comparisons are, as a rule, computed periodically.

Place Comparisons

Place comparisons are designed to show how much more or less it costs to live in a given city or locality than in other cities or localities.

Social Group Comparisons

Social group comparisons may show the differences in living costs of various social groups, as, for example, wage earners and clerical workers. Comparisons may also be made between different income groups within the same social group, as, for example, between government employees with salaries from $1,500 to $1,800, from $1,800 to $2,100, and so on.

Overlapping of Various Types

The above discussion is not intended to convey the impression that each type of measurement is independent of all the others. All that it is intended to show is that various types are possible, and as a rule each study is designed to indicate primarily one of these measurements. Sometimes, however, more than one of these phases is treated in a study.

Moreover, the three elements—time, place and persons—enter into each one of the studies no matter what its object may be. In a time series, for example, there must be a clear notion beforehand as to whose living costs are to be studied, in what place or places and at what periods of time. The comparison in such a case, however, would merely be emphasizing changes in point of time.

Selection of the Basic Budget

In the construction of an index of the cost of living, irrespective of whether it is a time, or a place, or a social group

comparison, one of the first problems is to determine the basic budget, i. e., a suitable list of commodities and services, for which changes or differences in cost are to be determined.

Total or Representative Expenditures

When the purpose of the study is to ascertain actual costs, *total* expenditures must be secured. This may be done by actually determining the cost of each one of the many commodities and services entering into household consumption, although this is a somewhat difficult task. More generally, actual costs are determined for all of the principal commodities and services, and some less important ones as well, and lump-sum allotments are made for some of the minor expenditures. On the other hand, when comparisons are made, total expenditures might be ascertained but are not necessary. As a rule, *representative* expenditures are determined and the assumption is made that those commodities and services for which costs have not been ascertained behave in the same way as those of which the costs are actually studied. Most cost of living studies are made in the latter way.

Theoretical Budgets

A basic budget may be constructed in two ways: it may be either "theoretical" or "actual." Theoretical budgets are determined on the basis of what those constructing them deem representative consumption of the type of persons whose living costs are to be studied. No detailed inquiry is made at the time to determine actual consumption, although decisions are often guided by what has been done by others. In the case of food, consumption is sometimes determined scientifically on the basis of caloric value and physiological requirements as to such elements as protein, fat or carbohydrate content.

Actual Budgets

Actual budgets are determined on the basis of actual investigation into the household expenditures of the types of persons under consideration. Such budget inquiries are sometimes made by having special investigators visit a certain number of persons or families of the type whose living

costs are to be studied, and question them in regard to their expenditures. This method necessarily involves a certain amount of guesswork on the part of those giving the information. Moreover, the answers given may be influenced by the type of question and the manner in which it is asked. Therefore, this method is not as satisfactory as a second method, which is to ask a number of persons or families to record daily their expenditures for a specified period of time, preferably stating also the quantities purchased. It will be readily seen that this method is more desirable than the first one, assuming of course that expenditures are carefully and honestly recorded. Generally, great difficulty is encountered in persuading people to keep such accounts. There is quite naturally a certain amount of suspicion as to the use which may be made of the results. Even after families have agreed to keep such accounts, they often fail to maintain interest long enough to carry out the plan during the entire specified period. Remuneration in prizes and other forms is sometimes resorted to in order to stimulate interest.

The kind of persons or families who are to be requested to record expenditures depends primarily on the purpose of the study. If the results are to be used in connection with an investigation of living costs of wage earners in general, wage earners' families representing different occupational groups should be surveyed. If, on the other hand, the living cost studies refer to a definite class of workers, as, for example, miners, the budget inquiry should be conducted among such families in order to assure correct information as to their consumption habits. If living costs of unmarried women are to be studied, such women should be asked to record their expenditures. Sometimes specific restrictions are adopted with respect to the size of the income of the persons surveyed.

It is generally advisable to get a fairly large number of persons to undertake such a recording of household expenditures since the results finally usable will in most instances be far below the total number of records started. The number of persons or families to be surveyed depends also on the type of individuals. Sometimes carefully kept returns from a few families may be more satisfactory than those kept in a rather haphazard way by a considerably larger number of families.

The period of time covered by such records may vary, although it is generally advisable to extend them at least over one year in order to take account of seasonal variations in the kind and quantities of goods purchased as well as seasonal fluctuations in prices. Frequently a much shorter period is taken because of the difficulty of getting families to keep account of their expenditures for a long period of time. The shorter the period covered, the more estimates have to be made, because certain types of articles, particularly clothing and some of the miscellaneous items, are not frequently purchased. Even when expenditures are recorded for an entire year a slight amount of estimating has to be made of such articles as coats, for example, which as a rule are not purchased every year.

The choice of localities where such budget investigations are to be made usually depends on the purpose of the cost of living study. If, for example, a time series index is to be established referring to the country as a whole, such investigations should be conducted among families living in different localities in order to represent various geographical areas and take cognizance of local peculiarities. If the index is to refer to certain districts or towns, the surveys should be made in those districts or towns. However, these general principles are not always followed when budget inquiries are made. Practical considerations often outweigh theoretical ones. Moreover, occasionally budget data are already available when an index of the cost of living is started and such data are used regardless of whether or not they apply to the localities covered by the index. In such cases allowances are sometimes made for differences in local habits.

Basic budgets are not always exclusively one type or the other. Sometimes both types are represented. Some major groups of expenditures, particularly food, may be based on actual investigations, while other expenditures may be based on theoretical considerations.

Variable Budgets

So-called *variable budgets* are also used in a few instances in Europe. The variable elements are generally found only in food. No definite articles or consumption quantities are

specified. The fixed element is the food value, i. e., the number of calories, the required amount of protein, fats and other necessary constituents of food to be provided. Whenever such an index is to be computed, prices are obtained for those commodities which may be purchased most cheaply in the market but at the same time contain the necessary food values. The quantities assigned to each commodity in the computation of the index are based upon the amounts required to provide the necessary number of calories and other requirements. Such an index is undoubtedly an attempt to eliminate to some extent the effect of seasonal variations. It is doubtful, however, whether the ordinary housewife has the necessary scientific knowledge to adjust her purchases in this way. While it is undoubtedly true that the housewife does curtail her purchases of some commodities which are particularly high priced in certain seasons, such adjustment can not be made with all articles of consumption.

Maintenance of Basic Budgets

In a time or place comparison, the theory that has been most widely accepted perhaps is that a basic budget once established should subsequently be used unchanged in the compilation of either time or place indexes. In other words, the only variable element should be the prices. On the uniform budget basis the cost of a given standard of living, or more specifically, the cost of specified commodities and services representative of living costs, can be compared at one period with other periods or at one place with other places.

Standards of living, however, are not fixed; they change from time to time and vary somewhat from place to place. Such variations can not be disregarded in the compilation of a time series of index numbers extending over a considerable period. These changes occur, first, within the several main categories of the cost of living and, secondly, in the relation which these main categories bear to one another. There are changes both in the quantities and kinds of the articles consumed or the services purchased. The demand for, and the use of, certain commodities may shrink and finally disappear altogether. New commodities take their place while other commodities acquire new uses and are consumed in larger

amounts. Should an index of changes in the cost of living take these changes into account or should it confine itself exclusively to price changes of specific commodities in specific quantities? Both theories have their adherents. Those who believe in the principle of maintaining an absolutely fixed budget will, after a sufficient period of time has elapsed to have produced a decided change in living standards, find themselves working with a measurement of somewhat limited significance. It may be a true index of certain retail prices, but, if those prices no longer represent the current expenditure of families, the value of such an index as an indication of change in the cost of living is seriously impaired. In such event it would seem to be in order to abandon the series entirely and to start a new one.

On the other hand, the principle of altering the budget in accordance with changes in consumption habits has been adopted in some instances, perhaps more than is generally believed.[1] Such adjustments, particularly within the fixed proportions of the several main categories, have been made in some indexes to a greater or less degree. They generally require slight alterations in the method of computation, which, however, do not affect the validity of the indexes.

Changes in the standard of living may also take the form of an increase or decrease in the relative amount of the entire family expenditure made, for example, for rent or food, thereby introducing the need for a change in the weight or importance of the categories in the budget. It is quite probable that the higher "real income" of most wage earners of today as compared with the pre-war incomes has permitted a somewhat higher standard of living than before the war. This means that a greater proportion of the income can be spent for commodities and services that are not primary necessities. Consequently, the proportion spent for food may be a little less than the previous proportion and that spent on "sundries" somewhat higher. Changes of this nature, however, can be determined only through rather comprehensive budget investigations.

[1] In Amsterdam, Netherlands, for example, periodical inquiries have been made to ascertain changes in the standard of living and the budget has been altered whenever the change seemed sufficiently important to warrant such a procedure.

In the final analysis, a budget which remains fixed results in a retail price index, while a budget altered occasionally to meet changed requirements may come a little closer to an approximation of changes or differences in the "cost of living" as commonly understood.

Composition of Major Groups in Budget

In order to cover, even in a representative way, all of the various types of expenditures which make up living costs, the budget is generally divided into five major groups of expenditures, namely, food, housing, clothing, fuel and light, and miscellaneous expenditures. In the National Industrial Conference Board index this miscellaneous group is called "sundries." A proper selection of a list of commodities and services, however, is not the only problem involved in determining a basic budget. Each commodity and service must be assigned its proper importance in the whole budget. For example, when price changes are determined from time to time, a change in the price of bread is of more consequence to the average consumer than a change of like magnitude in the price of pepper. The assignment of the proper importance to each item of expenditure is called weighting. This will be discussed in greater detail in subsequent pages.[1]

Food

The most important element in family expenditures, at least for families of small and moderate means, is food. Therefore, great care is generally exercised in the selection of commodities to represent this group. It is impossible to state definitely what articles of food should be included, since this depends primarily on how extensive the food budget is to be. There are some investigators who believe in the inclusion of many articles and there are others who consider the inclusion of a few of the principal ones sufficient to indicate the general trend. Between these two views there is room for considerable latitude. Certain staple articles of food, however, should undoubtedly be included in any food budget. Bread, milk, sugar, eggs, meat, potatoes, cheese

[1] See pp. 16–19 of this volume.

and butter or its substitutes are almost without exception found in the food budgets on which the index numbers published currently in the United States and foreign countries are based. Generally, certain cereals and dried vegetables, such as flour, rice and beans are included, and frequently also coffee and tea. Fresh fruits and vegetables are represented in some budgets but are generally omitted because it is considered that their marked seasonal character causes distortions in the index numbers. To overcome some of the effects upon the index of marked seasonal price fluctuations, when it is desired to include these two types of commodities, various methods have been used. In some of the budgets, certain definite standard articles have been chosen which may be purchased the year round without much seasonal variation in price. In others, no specific articles are listed but those which are in season at the time in question are priced. A system of correction may also be employed such as that adopted in the city of Milan, Italy.[1]

Housing

The determination of what expenditures to include under housing is somewhat more difficult than the selection of foods. Some dwellings are owned outright, some are owned subject to mortgage, and others are rented. Sometimes rooms are sublet. Moreover, it is occasionally difficult to separate fuel and light from housing. The nature and purpose of the study generally dictate the decisions made in regard to what information should be secured. Most commonly, housing is represented merely by rents paid. The selection of the type of dwelling for which rents are to be determined is again influenced by the type of persons whose living costs are studied. Housing accommodations also vary greatly in different localities and when an index covers various cities or districts this is an important consideration to keep in mind. Instead of definitely selecting a

[1] In the construction of the index computed by the Statistical Office of the City of Milan, Italy, average monthly prices for vegetables and fruits, respectively, are secured by taking the simple average of the weekly quotations obtained for all articles under these groups, and the simple average of the monthly average prices of the twelve months ending with the current month is the price actually used for the computation of the index.

standard type of housing, therefore, authorities carrying on cost of living studies which cover many localities where conditions vary widely, generally give a somewhat broad definition of the type of housing to be priced, with perhaps the added statement that it is to represent such housing as is most commonly occupied by the class of persons whose living costs are being studied. Generally, the number of rooms is specified, although such a number may be a range, as from three to four rooms. Some foreign studies include under housing certain extra charges that are imposed upon tenants in addition to rents. Such charges usually cover garbage disposal, lighting and water.

Clothing

The determination of a list of commodities in the clothing group of family expenditures is even more complex. As in the case of food, the first question to decide is how extensive a representation of articles is required. Further difficulty arises in the selection of articles which are adequately representative, and for which accurate prices can be readily obtained. In the computation of a time series, moreover, it is desirable to select articles which do not undergo substantial changes in kind or quality with changes in style or season, although in the case of some articles this is extremely difficult.[1] To these perplexities must be added the problem of assigning the proper importance to each commodity.

A study of the methods used in the construction of cost of living index numbers throughout the world reveals a variety of opinions as to what should be included in the "clothing" budget. Some authorities, for example, consider it useless to include finished articles of clothing because of changes in style and therefore include only yard goods. Sometimes certain allowances are made in such cases for making up the material. In other clothing budgets, only finished wearing apparel is included, while in still others both finished garments and yard goods are found. Because of the frequent changes in the styles of women's clothing, some authorities deem it impractical to cover more than men's clothing. Where such a procedure is used, an allowance is sometimes

[1] See pp. 10–12 of this volume for changes in standards of living.

made for women's and children's clothing. The restriction of clothing budgets to men's clothing is, however, exceptional in cost of living studies. As a rule, separate budgets are made at least for men and women, and sometimes also for children. The articles most commonly included in clothing budgets are: for men, suits, overcoats, hats, underwear, shirts, socks and shoes, and quite frequently working suits or overalls; and for women, suits or dresses, underwear, shoes and stockings. Children's allowances usually vary according to age.

Fuel and Light

The selection of commodities to represent fuel and light is greatly influenced by the standard of living of those to whom the study applies. Coal usually represents the fuel item, but wood is sometimes included. Gas, electricity and kerosene may represent the light item, depending, of course, on how extensively each of these three means of lighting is in use. Gas is also used rather widely for cooking purposes and to some extent also for heating. Candles, matches and denatured alcohol are found in some of the foreign budgets.

Sundries

The four major groups of items described above represent expenditures for the primary necessities. Man must be fed, clothed and housed and he must be kept warm and have light. Beyond these absolute requirements, however, there are expenditures for a variety of goods and services most of which are not absolutely essential, but, in this modern age, are considered almost indispensable for decent living. The splitting up of this varied assortment of expenditures is generally considered inadvisable and therefore they are, as a rule, grouped together under one heading. The National Industrial Conference Board labels this group "sundries"; other authorities call it "miscellaneous items." The name is not of importance. The difficulty lies in establishing a suitable list of commodities and services to cover these miscellaneous expenditures. Those authorities who believe in a rather wide coverage generally include articles and services falling under the following headings: transportation, medical

care and drugs, personal hygiene, reading matter, recreation, insurance, replacement of household articles, association dues and smoking. Other types of expenditures which it is sometimes deemed desirable to include cover such items as washing and cleaning, church, charity, gifts, taxes, stationery and postage stamps, school fees and supplies, and in some countries, alcoholic beverages. Expenditures for domestic help are sometimes included if the study in question applies to types of persons employing such help. Occasionally an extra allowance is made for "non-specified" items or "other" items in addition to the specified articles and services in order to take account of incidental expenditures not otherwise covered. Such an allowance is generally made by allotting a lump sum or a certain percentage of the other groups.

After the types of expenditures under the heading "sundries" have been decided upon, the problem arises as to what to include under each subdivision. This is a most perplexing problem and one which calls for the exercise of sound judgment. In a study such as a time series which requires constantly repeated ascertainment of prices, the choice of articles and commodities to be selected is generally influenced by such practical considerations as the possibility of obtaining prices at regular intervals. Because of these real difficulties, and in view of the fact that while "sundries" as a whole plays a considerable part in the total living costs, each individual item is only of relatively minor importance, estimates are not infrequently used. It is assumed, for example, in some instances, that certain expenditures vary in different places or at different times in the same degree as certain other expenditures. Some authorities, because of the difficulties involved, do not even attempt to study this phase of living costs.

Weights of Major Items and Their Component Parts

It has been pointed out that the proper selection of articles and services to be included is only one of the problems involved in the construction of a budget. It is also essential to assign to each its proper importance, or, technically, to "weight" each correctly. Weighting may be done in several ways, depending primarily on the type of study

and again on the mathematical formula used in the computation of the index, if an index is constructed. In the final analysis, weighting is based on consumption, although methods of arriving at the proper weights may vary. The basis of ascertaining weights has been explained before in the discussion of actual and theoretical basic budgets.[1]

When the cost of living study is concerned with monetary costs, the weights used are the actual quantities consumed. For example, the expenditures of a family for a specified list of foods during a given time can be determined only by ascertaining the prices of the respective commodities and multiplying them by the quantities consumed during the period covered. This procedure is applied also to articles of clothing, to coal, to transportation and other items to which the word "consumption" is applied in its broad sense as meaning "used." Even when actual costs are not calculated for all of the numerous commodities and services entering into living costs but merely for the principal ones, while certain lump-sum allowances are made for the others, such allowances are also ultimately based on consumption. Quantity weights are expressed in pounds, quarts, ounces, etc., and indicate the amount supposedly consumed by a specified number of persons during a given time. The number of persons whose consumption is represented should correspond with the number of persons to whom the study refers. When living cost investigations deal with families, an "average" family comprising a husband and wife and a specified number of children, generally under fourteen years of age, is usually taken as the basis for determining representative family consumption. The number of children as a rule varies according to the social group to which the families belong and according to country. Two or three children are usually included. It is important that the consumption of each article be in appropriate relation to that of every other article. The period of time for which the consumption is computed is important only if actual costs are to be determined for a stated period. Otherwise, it is immaterial whether the period of time is a day, a week, a month, a year or some other length of time, provided that it is the same for

[1] See pp. 7–9 of this volume.

all articles and services or can be adjusted to some common basis.

Consumption quantities are not always given in terms of a number of persons but may be expressed as units of consumption. In such a procedure, the unit may be the consumption of an adult male, with the consumption of the other members of the household expressed in terms of fractions of that unit. There is also the so-called "quet" system[1] used in Belgium. This has been explained in the following manner: If one takes as unity (1 quet) a new-born infant, the consumption power of an individual may be considered as growing one-tenth each year until after the age of twenty-five years for a man, and that of twenty years for a woman. An adult man (of 25 years of age or more), therefore represents a consumption of 3.5 (quets) and a woman (of 20 years of age or more) a consumption of 3 (quets).[2]

When index numbers are computed it is not necessary that the weights be expressed in quantities such as pounds, quarts, etc. In such cases weights may be in terms of expenditures, either actual or relative. In other words, the expenditures for each article during a specified period of time may be found and these expenditures may be applied as weights. The actual amount in each case could be used, but since that method results in the handling of awkward figures at times, the separate expenditures are generally expressed as percentages of the total expenditure. However, total expenditures need not be expressed as 100; any figure will do provided the component elements are all in proper relation to each other. To take a simple example, if three commodities represent the items in a certain group and Article 2 is twice as important as Article 1 and Article 3 is three times as important as Article 1, the weights could be expressed simply as 1, 2, and 3, respectively, or on a percentage basis as 16⅔, 33⅓ and 50, respectively. As pointed out in the subsequent explanation of the difference between the various mathemati-

[1] So named after Adolphe Quetelet, a famous Belgian statistician. This unit was first proposed by the Prussian statistician, Ernst Engel, in a study of Belgian budgets of 1853 and 1891. His paper was printed in the *Bulletin de l'Institut International de Statistique*, 1895, vol. ix, part 1.

[2] *Revue du Travail*, Brussels, Belgium, October 15–31, 1920, p. 528.

cal formulas,[1] the use of either actual quantity weights or expenditure weights in connection with the computation of an index depends on the type of formula.

Where relative expenditure weights are used, it is necessary to find weights not only for each commodity and service within each major group of expenditures, but also for each major group as related to the total cost of living. Unless an index covers the five major groups of expenditures which most authorities agree should be considered, any comparison of the results of different investigations would be invalid. Even where these five groups are covered, however, the weighting procedure varies. Some of the variations may be attributed to the fact that the investigations cover different social classes or different income groups within the same social class. Even where similar types of persons are covered, there are differences noted in the weights assigned to each major item.[2] As pointed out before, the relative proportion of the total living expenditures spent on food decreases with increased income and that spent for "sundries" increases. Opinions differ as to whether the relative proportions spent for the other three major items shift as the incomes increase. Some authorities believe, however, that the proportion spent for clothing expands with the increase in income. It should be emphasized, however, that reference is made here merely to the *relative* proportions of expenditures and not to *actual* expenditures.

Collection of Prices

Regardless of the type of cost of living study, except perhaps in a budget study, it is necessary to collect prices of the commodities and services on the basis of which actual costs or index numbers are to be computed. The collection of prices entails a number of problems, some of which are peculiar to certain types of studies and others which are common to all.

Types of Prices

Cost of living studies should be, and in practically all

[1] See pp. 27–29 of this volume.

[2] See, National Industrial Conference Board, "The Cost of Living in Foreign Countries," New York, 1927, p. 89.

studies which have been or are being regularly made are, based on retail prices.[1] It is apparent that wholesale prices are inadequate for such purposes, since the prices which the consumer must pay are retail prices. While the latter follow in a general way the movement in wholesale prices, the changes do not take place at the same time nor to the same extent. Moreover, there are many articles of consumption and services for which no wholesale prices are available.

Retail prices vary because of differences in the quality of the articles or in brands, and also because the price of identical merchandise differs between localities and even within localities according to the type and location of the stores. When collecting prices, therefore, the purpose of the study must be clearly kept in mind in order to secure representative prices. First of all, the kind and quality of each article or service must be carefully specified. Data must be collected from a number of sources. From the several prices collected for each article a representative price must be obtained. When such prices are collected in one locality, for example, such a representative price may be found by taking an average of the available quotations. An average may be obtained in various ways. The method perhaps most frequently used is to take a simple average, that is, the arithmetic mean. Another method often employed is to find the predominant price, i.e., the most frequently occurring price, or in technical language, the mode. A third method is to use the price which will be found in the exact middle of all the prices when they are arranged according to size. This is called the median, but it is rarely used in the selection of a representative price for a cost of living study. Although, obviously, an average price obtained by one or another method is the price which should be secured, in rare instances the lowest price available has been used in the construction of cost of living index numbers. When prices are collected in more than one locality and it is desired to secure a representative price for all of the localities combined, a further problem arises as to

[1] In a few rare instances, wholesale prices have been used in the construction of some foreign index numbers designed to show changes in the cost of living. Generally such a procedure is merely a makeshift arrangement adopted because wholesale prices are already available.

how these prices should be combined. This will be discussed subsequently in the section on "Localities."[1]

Sources from which Prices Should be Collected

The sources from which prices are to be collected depend upon the purpose of the study and the nature of the commodities and services to be priced. If the study refers to wage earners, retail stores in which wage earners commonly make their purchases should be solicited. This does not necessarily mean that the stores should be located in sections where wage earners live. As a rule, food commodities are purchased in neighborhood stores, although where there are public or centralized market places, these are sometimes patronized because of lower prices. Clothing, on the other hand, is often purchased in so-called "down-town" stores and where such is the case prices should also be collected in this type of store. Gas and electricity charges may be obtained from the respective companies or municipal plants, either directly or from published rates. Rent information may be secured from tenants, proprietors or real estate agents.

In the case of some articles or services, such as electricity, it does not matter whether the study applies to one type of persons or another, since there is a single standard price. In other cases, however, it does matter, and therefore attention must be given in the choice of dealers to the classes in the community that form their customers. The number of sources from which quotations are to be obtained is influenced by the size of the locality investigated and by the representativeness of the sources of price data. Another consideration to keep in mind when selecting sources of information is the fact that some articles may not necessarily be purchased in the particular towns which are being surveyed. Residents in the smaller towns not infrequently purchase certain articles of wearing apparel in nearby cities.

Localities in which Prices Should be Collected

When the cost of living study refers to a single locality, it is self-evident that prices should be collected only in the

[1] See p. 22 of this volume.

locality in question, and likewise in a place comparison, prices should be collected in the localities under consideration. In a study applying to a district or state, or to the country as a whole, a selection has to be made of those localities which are representative of the area under consideration. The choice is influenced by the purpose of the study. If, for example, the study is to ascertain changes in living costs of industrial wage earners, towns industrially prominent should be selected. Generally, towns of different sizes are chosen in order to take account of any differences in prices between small and large towns. Moreover, localities in various geographical areas are generally chosen to take cognizance of any geographical peculiarities.

The method of obtaining representative prices in a single locality has already been described. When more than one locality is covered and a representative price for the wider area is desired, an additional problem arises. An average price may be obtained in various ways, best explained by an illustration. Let it be assumed that for a given commodity ten quotations have been obtained in X, a town of 20,000 inhabitants, twenty quotations in Y, a town of 70,000 inhabitants, and thirty quotations in Z, a town of 100,000 inhabitants. From the three towns there are an aggregate of sixty quotations. It is possible to determine the representative price by any one of three methods. (1) The sum of all of the quotations may be divided by sixty to secure an average. (2) An average may be obtained for each of the towns X, Y and Z; these averages may be added and divided by three. The first method gives each quotation equal weight irrespective of its origin; the second gives each city, irrespective of its size, an equal importance. In order to avoid either of these results, a third method may be used. (3) The average of each of the cities may be multiplied by a weight proportional to its population. The sum of the products is then divided by the sum of the weights, to secure an average price. These methods may be somewhat modified by the use of the mode or median instead of the arithmetic mean used in the illustration. As mentioned before, however, the median is rarely used in the construction of cost of living indexes.

Frequency of Collecting Prices

The frequency of collecting prices depends, in the first place, upon the purpose of the study. Generally, when an inquiry is confined to the determination of the actual cost of living, a single price survey is required and no problem arises as to the frequency of collecting prices. It may be desirable, however, to express such costs as an average for an entire year, in which case a decision must be made as to how often prices are to be collected during that year. The same remarks apply to a place comparison or a comparison of living costs among social groups.

As a rule, the problem of how often prices are to be ascertained does not arise unless a time comparison is planned. One of the factors which governs the frequency of collecting prices is the frequency of computing the index. This in turn depends on various conditions. When prices fluctuate greatly within short spaces of time, it is desirable that index numbers be computed at least monthly, and in periods of extraordinary upheavals a shorter interval is advisable, even though the scope of the inquiry may have to be somewhat limited. During the post-war inflation period in Germany, for example, prices were rising so rapidly that for a while cost of living index numbers were published weekly. When economic conditions are fairly stable, there is no pressing need to compute such indexes at frequent intervals and, therefore, some authorities compute them quarterly while others do so only twice a year. A monthly index during "normal" times has the advantage of showing seasonal variations. When the frequency of publishing the index has been determined, it obviously becomes necessary to collect prices at least as often as the index is computed, except in the case of some commodities and services the prices of which are not subject to frequent alterations, as, for example, newspaper prices or gas rates. When the prices are secured only as often as the index is computed, the results refer to one specific date, which may be considered as representative of the month of which it is a part. Sometimes it is considered preferable to base the index on several days during the month, quarter or half year in question and to take an average of the prices before proceeding to the computation of the index. Practical con-

siderations, however, often preclude adherence to policies which may be theoretically desirable. The collection of prices, especially when covering large areas, is a somewhat costly procedure and, although a more frequent determination of prices may be desirable, it can not be undertaken because of costs involved.

Methods Employed in Collecting Prices

There are two principal means of collecting prices: (1) They may be sent directly through the mail from the dealers to the authorities calculating the index; and (2) they may be obtained by special agents. The former method is generally referred to as the questionnaire method, although strictly speaking, both may be questionnaire methods, since the quotations secured by the special agents are usually entered on questionnaires and sent in this form to those who compute the index. Which of the two methods is to be preferred depends upon the relative intelligence, reliability and accuracy of the dealers and the special agents, as well as upon the extent to which it is possible to secure the direct cooperation of the dealers in supplying the data. The additional cost of maintaining special agents may also be a factor to be considered.

When information is secured by correspondence from the dealers, the latter are generally supplied with questionnaires on which are listed the articles for which prices are to be quoted, together with such specifications as will enable the dealers to know the kind and quality of the articles in question. When special agents are employed, they are sometimes employees of the authorities compiling the index, who personally visit all of the stores, real estate agencies, etc., in the various towns, and sometimes they are paid agents who live in the localities where the prices are collected. There are two ways in which special agents may collect prices. Either they may question the dealers, real estate agents, etc., and record the information given, or else they may actually price the articles in the stores, and determine rents for apartments or houses through tenants or by looking up accommodations which are "to let."

It has already been noted that clear instructions should be

given as to the kind and quality of article to be priced in order to assure as nearly as possible identical quotations from the various sources and from time to time if the study is a time comparison.[1] To the same end, prices of the preceding date or of the base date, or both, are often given on the questionnaire when it is submitted to the dealers or agents. For articles of clothing, samples may be attached to secure comparable quotations.

Computation of Costs or Index Numbers

When the purpose of the study is the determination of actual costs, and this is not accomplished by recording actual expenditures as in a budget study, then the desired results may be obtained by multiplying the average prices by the respective quantities consumed of each article and adding the resulting products. If the prices collected do not cover all of the various items of expenditure, additional lump sums for certain commodities or services have to be added. When the purpose of the study is to provide a comparison by means of index numbers, however, several points have to be considered, namely, (1) the base with which comparisons are to be made, (2) the mathematical process to be followed in the computation of the indexes, (3) revisions or modifications in the indexes.

Base

In any compilation of index numbers of the cost of living, it is generally desirable to have some common basis upon which comparisons may be made. In a time series the base is a specified time. In a place series it may be one or more given places. In a social group comparison expressed in terms of index numbers, it may be one or more such groups. Since the principles of the selection of a proper base are in general common to the three types of studies mentioned, it is necessary to discuss only the use of a base in a time series, which is the type in which a base is most commonly encountered.

The fixed point of time with which the comparisons are to

[1] See pp. 10–12 for discussion on changing standards of consumption.

be made in a time series is called the base period. It is not absolutely necessary that this base period be identical with the period represented by the standard of living taken as the basis for the budget adopted. The changes in the cost of the goods and services required under a certain standard of living at a particular period of time may be based on the prices prevailing either prior or subsequent to that period.

Any given period of time may be taken as the base period, although it is preferable to take an average of several periods because such procedure will tend to iron out any irregularities encountered. Sometimes a single day of a month is chosen, although in many cases the base is simply referred to as that particular month. Sometimes several days in the same month may be selected and an average taken. Again, the base period may represent the average of one particular day in several months or a whole year or even several years. Whether only one or more dates are chosen is necessarily influenced by the relative stability of prices during the period in question. The war period of rapidly fluctuating prices was unsuitable as a base for index numbers, and a choice has generally been made between a pre-war and a post-war base period, although some authorities employ both, or have changed from a pre-war to a post-war date.

On general principles, it is not advisable to take as a base any period which has been characterized by exceptionally high prices or extraordinarily low prices, unless there are some special reasons for doing so. A certain psychological reaction is produced by taking either a very low or a very high point as a basis for comparison. In the former case, the resulting index numbers give the impression that living costs are high in periods of normal or average prices. On the other hand, the belief that such costs are comparatively low is created when a very high point is used as a base.

The prices of the base period are usually expressed as 100, though this is not always the case. In some instances 1,000 or even 1 is used to denote the prices in the base period. It may be noted that if the base period is expressed as 100 and the subsequent indexes are expressed with one decimal point, e. g., 175.2, the measure is the same as if the base were called 1,000 and the index 1,752. In practice, since one decimal is

generally used, the variations of the index are in effect commonly expressed as thousandths. If they are, in practice as well as theory, expressed as hundredths on a basis of 100, no decimal points will be used. The use of the base 1 instead of the usual base 100 is best suited to the abnormal changes of prices which accompany excessive currency depreciation. There is, of course, no rule other than that of convenience which establishes such numbers as 1, 100 or 1,000 as the expression of the base period. Any other number would in theory meet the situation, but would be awkward to handle.[1]

The successive price levels are usually expressed as a percentage of the price level in the base period. An illustration referring to a single commodity is sufficient to make this clear since the same principle holds true in the case of a number of commodities combined. Let us assume the price of a certain commodity to have been $8.36 and $7.40 on two successive periods and $8.00 in the base period. The price relatives may then be expressed as 104.5 and 92.5 when the base period is taken as 100, and as 1,045 and 925 when the base period is expressed as 1,000. What these figures really show is that the price has increased 4.5% on the one date and decreased 7.5% on the other. This method of expressing the price changes as a percentage increase or decrease, in the example as +4.5% and −7.5%, respectively, is sometimes followed in publishing the results of index calculations.

Aggregate Expenditure Method

Essentially there are two methods which may be employed to compute the index numbers either of the separate major items or of their total, namely, (1) the aggregate expenditure method, and (2) the weighted price relative method.

The aggregate expenditure method, which is essentially a means of comparing for two dates the total cost of given quantities of specified articles and services, is as follows: The current price of each article is multiplied by the quantity of that article allowed in the budget, thus obtaining the expenditure for each article on the current date; these expenditures within each major item are added; the sums

[1] The base of one of the earliest and best known indexes of wholesale prices, that of the London *Economist*, was formerly expressed as 2200.

obtained for each major item are divided by the corresponding sums for each major item in the base period, and the results are multiplied by 100 (if the base period is taken as 100). These final numbers represent the index numbers for each major item. Similarly, by adding the expenditures for all the articles and services in the entire budget, dividing by the corresponding sum in the base period, and multiplying by 100, the index numbers for the total cost of living are obtained. This is the process of computing the index numbers by the aggregate expenditure method when this method is used throughout.

Since under this method each major item is weighted indirectly, there is no need of weighting the index number of each major item in order to derive the total cost of living index. However, there may be circumstances in which direct weights are applied to each major item. This is the case where a total index is desired which will reflect a change in the importance of those items. For example when further investigations of household expenditure without a detailed inquiry into the articles within each group have led to the conviction that the groups or major items themselves should have other proportions within the budget, the proportions ascertained by this further inquiry may be used to weight the indexes of the major items obtained on the basis of consumption weights applied to each article.

Weighted Price Relative Method

The weighted price relative method involves the calculation of price relatives for each article. This is done by dividing the current price of each article or service by the corresponding price in the base period and multiplying the results by 100 (if 100 is taken for the base period). These price relatives are then multiplied by the weights assigned to each, the products are added, and the sums thus obtained are divided by the sums of the weights, in order to obtain the index numbers for each major item. These index numbers are in turn multiplied by the weights attributed to each major item, the products are added, and the total divided by the sum of the weights, which results in the index number of the total cost of living.

A slight variation from the usual procedure occurs when the index numbers of the major items, instead of being stated in relation to the base 100, are expressed for the time being, for purposes of calculation, not of publication, with a base of 1. If such index numbers are multiplied by the respective weights, which add up to a total of 100, and the products are added, the sum will then represent the total cost of living. In this case there is no need of dividing the total by 100.

Modifications and Combinations of Both Methods

While there are certain modifications within either the aggregate expenditure or weighted price relative methods, both methods may be and often are followed in the computation of the total index of the cost of living. Thus the aggregate expenditure method may be used in the computation of some of the major items, the weighted price relative method may be used for the others, while for the computation of the total index the index numbers obtained for each major item are weighted by their respective weights.

Nor is it always necessary to divide the prices or expenditures by those of the base period. A link system may be followed, whereby prices of one date may be compared with prices of the preceding date or some other date, and the price change thus obtained may be then applied to the previously ascertained price relatives or indexes for those dates, thus establishing index numbers relative to the base period.

Revision of Index Numbers of a Time Series

It has been pointed out previously that because of changes in consumption habits, time series which have been running for a considerable length of time lose their practical value unless such changes are taken into account. When standards of living have changed sufficiently to make a continuation of the old series impracticable, two alternatives are open to the investigator, either to abandon the old series entirely and start a new one or to modify the basis of construction and link the new series to the old. If there is no particular reason for comparing current changes in living costs with the costs of the base period used in the old series, a new series may be started with a later date as base. If it is

still desired, however, to make such a comparison, a linked system will be required because of the fact that no comparable prices on the base date will be available for some of the additional commodities or services required under the changed standard of living. Slight changes in the budget do not always require an alteration in the method of computation. More profound changes, however, do necessitate adjustments. Such adjustments may be made, for example, through the method followed by the Conference Board in the computation of its revised clothing index. Since that method will be subsequently explained in detail,[1] further discussion of the procedure in making adjustments is not required. It may be mentioned, however, that link systems rest on the assumption that the behavior of the prices of the new commodities would have been the same during the earlier periods as the average behavior of the prices of the commodities previously included. The addition or omission of localities represented in the index rests upon similar assumptions.

[1] See pp. 52–53 of this volume.

CHAPTER II

METHOD OF COMPUTING THE COST OF LIVING INDEX OF THE NATIONAL INDUSTRIAL CONFERENCE BOARD

THE National Industrial Conference Board was the first to establish for the United States as a whole a continuous series of indexes designed to measure changes which occur in the course of time in the prices of commodities and in the cost of certain services commonly entering into the household expenditures of wage earners. In its essential outline the index still rests upon the same basis as when it was first conceived, although refinements have been made from time to time.

The general problems connected with the construction of such an index have been explained in Chapter I. As related to the cost of living studies of the Conference Board, these problems have involved, in the first place, a selection of commodities and services representative of expenditures commonly made by wage earners; secondly, the collection of prices for these commodities and services under conditions that will insure the utmost practicable continuity and provide an area of investigation sufficiently large to represent adequately the United States as a whole; and thirdly, the combination of the prices secured in such a manner as to show most effectively the net result of their movements on the wage earner's purse. Moreover, since the index was designed to measure price changes during the course of time, it was necessary to decide upon a suitable date from which to determine such changes. These problems the Conference Board met in the following manner.

Inception and Development

When during the World War commodity prices had risen very sharply, the National Industrial Conference Board

undertook an inquiry, in June, 1918, in order to determine the extent of this advance in prices, or more precisely, to ascertain how much more wage earners would have to spend in order to maintain the standard of living to which they were accustomed before the war. Similar investigations were made in November of the same year and in March, July and November of the following year. Since 1920, index numbers have been constructed each month, although until December, 1925 the figures computed for the months other than March, July and November rested upon a more limited basis. Since the end of 1925, the monthly indexes have been based upon comprehensive investigations. The indexes for July, 1915, July, 1916 and July, 1917 have been interpolated in order to form a continuous series since 1914.

Until April, 1922, the indexes were published as of the first of each month and the food figures for the preceding month secured from the United States Bureau of Labor Statistics were included as representative of the current month. After April, 1922, all the figures of the Conference Board were compiled as of the fifteenth of the month and the earlier figures were corrected so that all prices would relate to the same day of the month.[1]

In the present volume, the discussion will relate chiefly to the results of the comprehensive investigations; figures obtained during the earlier period by summary methods for intervening months will be noted merely for reference.

The index of the National Industrial Conference Board has been based upon the prices of the month of July, 1914, the last month in which pre-war conditions prevailed. It is generally recognized that, as a rule, a single date is less desirable than an average figure as the basis for an index number. However, in periods in which prices are not subject to unusual disturbance, when, in other words, they can be regarded as more or less in the state of equilibrium, the use of a single date is justified by the fact that in all probability figures for that date will vary only in a slight degree from the average for the period of which it is a part. So far as retail prices are concerned, this was the situation in 1914,

[1] For original series, see National Industrial Conference Board, Research Report No. 49, p. 43.

and the selection of the single month, July, 1914, as a basis for the index number was quite as satisfactory, for example, as an average of the first six months of the year 1914. The adoption of the single month as a base was also justified by practical considerations. When in June, 1918 the index was established, it was necessary not only to ascertain the prices in that month, but also to establish prices of the same commodities for the base date, July, 1914. The latter task was very difficult, for retail prices are not matters of record to the same extent as wholesale prices. Their ascertainment for earlier periods is a matter of painstaking research. It would have added little to the value of the returns, and would have increased vastly the amount of labor involved, to have extended this research over a considerable number of months.

Basic Budget

The combination in suitable proportions, or, in technical language, the choice of a series of weights for the articles and services in each of the major groups of expenditure and the proper relative weighting of those groups is as important in the composition of a basic budget as is the selection of suitable articles and services to be priced.

Distribution of Expenditure: Weights

Since no comprehensive investigation of wage earners' budgets showing the relative proportion of the different groups of household expenditure had been made during the years immediately preceding the war, it was necessary in the preparation of the basic budget for the Conference Board's study, to resort to an estimate, drawn from the most appropriate material then available. This material consisted of a comprehensive investigation in 1901 by the United States Bureau of Labor Statistics and a number of later investigations of much more restricted scope which had been undertaken by the same Bureau and by other agencies. The results of these various budget investigations covering the period from 1901 to 1917, which are listed in Table 1, were combined into an average for each of the various items weighted according to the number of families represented.

These averages serve as the basis of the weighting system used for the index of the Board. The figures thus derived are, it is obvious, heavily influenced by the results of the 1901 investigation. The addition of the figures for a few families in 1915 and 1917 does not materially change the result. The basic budget, therefore, is not strictly applicable to the year 1914, but merely represents the pre-war standard of living among wage earners.

TABLE 1: PERCENTAGE DISTRIBUTION OF EXPENDITURES FOR THE MAJOR ITEMS IN THE ANNUAL BUDGETS OF WAGE EARNERS' FAMILIES

(Compiled by National Industrial Conference Board)

Authority, Date, Locality Covered, Number of Families	Food	Housing	Clothing	Fuel and Light	Sundries	All Items
United States Bureau of Labor Statistics						
1901: United States, 11,156 families	43.13	18.12	12.95	5.69	20.11	100.00
1917: New York City, 608 families	45.01	12.91	14.84	4.61	22.63	100.00
1917: Philadelphia, 512 families	43.31	12.04	15.97	4.95	23.74	100.00
United States Railroad Wage Commission						
1915: United States, 265 families	38.0	20.0	15.0	6.0	21.0	100.00
Dallas Wage Commission						
1917: Dallas, Tex., 50 families	45.01	14.51	12.57	9.11[1]	18.80	100.00
Robert C. Chapin						
1907: New York City, 31 families with incomes $1,000 to $1,099	44.7	18.1	15.5	4.5	17.2	100.00
Average, weighted according to number of families	43.13	17.65	13.21	5.63[2]	20.38	100.00

[1] Includes expenditures for ice, telephone, water and laundry, as well as for fuel and light.

[2] Excluding Dallas, the average proportion of the total expenditure for fuel and light is 5.61%.

The apportionment of the total cost of living among its more important component parts solved only part of the problem of measuring price changes. Equally important was the selection of the representative articles which were to be priced. The basis of selection under each major group of expenditures will be discussed in the following sections. In the index, as finally developed, there are embodied the

prices of as many as ninety-five articles in the three groups, food, clothing, fuel and light. Rent may perhaps be deemed a single quotation, although, as will be explained later, it is a composite of the rents for somewhat varied accommodations. The group sundries is represented in some of its sub-divisions by a single price, in others by a variety of prices, so that the total number of individual prices which enter into the composite sundries figure is eighty-seven.

Food

The food index used by the National Industrial Conference Board is that computed by the United States Bureau of Labor Statistics, and is based upon a monthly survey of retail prices of forty-three commodities representative of food consumption.

A list of the forty-three commodities, together with the annual consumption per family by means of which the index is weighted, is given in Table 2.

It will be noted that in the list given very few fresh fruits and vegetables are included. The highly seasonal character of these articles renders it very difficult to obtain comparable prices at different periods of the year. The omission of such commodities may in some degree affect the index of the cost of food as it is calculated from month to month, but has no appreciable effect upon the general level of food prices from one year to another. This list is a representative one and it is assumed that the general level of prices exhibited by the group of food articles specifically enumerated is characteristic of the other articles of food not included in the list.

This food budget is based on the exhaustive study of the cost of living in the United States made by the Bureau of Labor Statistics in 1918 and 1919, and is designed to represent the food consumption of wage earners' families. The average family for the United States as a whole was found to number 4.9 persons. While the consumption of specific articles is stated, the total food consumption is not given. The aim has been to include, as far as possible, every type of food, but not the total amount under each type.

How far the specified articles represent food consumption

TABLE 2: ANNUAL CONSUMPTION OF FOOD PER FAMILY, ARTICLES AND WEIGHTS, BY GEOGRAPHIC DIVISIONS

(Source: U. S. Bureau of Labor Statistics)

Article	Unit	United States	North Atlantic	South Atlantic	North Central	South Central	Western
Sirloin steak	Pound	32	27	35	34	38	39
Round steak	Pound	32	27	35	34	38	39
Rib roast	Pound	31	30	24	32	24	39
Chuck roast	Pound	31	30	24	32	24	39
Plate beef	Pound	23	25	17	23	16	27
Pork chops	Pound	36	29	43	45	42	25
Bacon	Pound	17	13	20	18	17	19
Ham	Pound	22	26	43	14	19	10
Lamb	Pound	8	14	2	2	1	13
Hens	Pound	23	25	24	23	22	19
Salmon, canned	Pound	9	10	9	9	9	6
Milk, fresh	Quart	337	412	155	364	177	377
Milk, evaporated	Pound	77	95	73	48	85	92
Butter	Pound	66	75	56	53	60	89
Oleomargarine	Pound	16	8	9	30	16	8
Nut margarine	Pound	6	4	5	11	3	2
Cheese	Pound	12	12	13	12	11	15
Lard	Pound	34	27	38	45	38	18
Vegetable lard substitute	Pound	9	6	10	5	22	16
Eggs, strictly fresh	Dozen	61	68	57	53	55	70
Bread	Pound	531	642	417	521	450	438
Flour	Pound	264	224	313	263	318	280
Corn meal	Pound	54	29	108	39	140	34
Rolled oats	Pound	41	45	31	39	38	45
Corn flakes	Pound	7	6	6	6	13	5
Wheat cereal	Pound	7	7	2	6	3	12
Macaroni	Pound	23	25	15	20	29	27
Rice	Pound	35	32	55	26	56	28
Beans, navy	Pound	22	23	17	25	21	19
Potatoes	Pound	704	746	514	810	485	706
Onions	Pound	66	72	52	62	82	64
Cabbage	Pound	65	62	61	70	66	61
Beans, baked	Pound	7	8	10	6	5	4
Corn, canned	Pound	10	8	9	13	10	10
Peas, canned	Pound	10	10	9	13	9	9
Tomatoes, canned	Pound	16	15	21	10	35	12
Sugar	Pound	147	140	145	154	133	161
Tea	Pound	8	13	6	5	3	6
Coffee	Pound	40	33	42	45	52	35
Prunes	Pound	11	14	9	11	8	10
Raisins	Pound	9	9	4	11	7	12
Bananas	Dozen[1]	11	11	8	11	13	9
Oranges	Dozen[1]	7	6	9	6	9	8

[1] In cities where most of the sales on bananas are by the pound rather than by the dozen, the weightings as given in this table have been multiplied by three and have then been applied to the prices on the pound.

from the point of view of different types of food can be seen by comparing the list here given with the more detailed statement given by the Bureau in one of its publications.[1] The extent to which the specified articles represent the total amount of food consumed can be approximately measured by computing the nutritive value of these food budgets in calories. This is given in Table 3.

TABLE 3: ESTIMATED CALORIES IN BUDGETS USED FOR DETERMINING CHANGES IN FOOD PRICES

(Source: National Industrial Conference Board)

Region	Estimated Calories in Annual Consumption of 43 Articles of Food	Per Cent of Approximate Total Annual Food Requirement[1]
United States	3,142,800	70
North Atlantic	3,197,203	71
South Atlantic	2,928,469	65
North Central	3,172,220	70
South Central	3,122,255	69
Western	3,115,069	69

[1] Annual food requirement estimated for a family of five persons, man, wife, two younger children, and one grown son or daughter, is 4,500,000 calories.

Dietary investigations of food requirements have established a daily need of 3,500 calories for a man engaged in physical work. Allowances for the wife and three children bring the annual family requirement to approximately 4,500,000 calories.[2] Of this amount, a little more than two-thirds is represented by the calories estimated for the average budget here used for the study of changes in food prices in the United States.

The retail food price index is calculated at the present time by the Bureau of Labor Statistics on the average prices of 1913. It is used in the index of the National Industrial Conference Board, however, as a measure of changes in food prices without conversion to the July, 1914 base. So far as

[1] U. S. Bureau of Labor Statistics, "The Cost of Living in the United States," Bulletin 357, May, 1924, pp. 108–119.

[2] A statement of such requirements with references to further literature on the subject will be found in the National Industrial Conference Board's volume, "The Cost of Living in New York City, 1926," p. 47.

can be ascertained, there was no appreciable difference between the prices in July, 1914 and the average of 1913.

It should be pointed out that the food index of the United States Bureau of Labor Statistics has undergone many revisions. Only fifteen articles were priced in 1913, to which were added three in the succeeding year and four in 1915. Beginning with January, 1921 the number of commodities was increased to forty-three. The articles in the earlier series were weighted according to the consumption data secured in 1901, when some 2,567 families were studied. In 1918–1919, a new study of nearly 9,000 families in fifty-one cities was undertaken and a new series of consumption weights was calculated on the basis of an enlarged budget. The weights were sufficiently comparable with the former schedule to permit the new series of index numbers to be linked on to the old, thus giving a continuous series that reflects food price changes from 1913 to date. The effect of the new weighting, however, was slightly to minimize the fluctuations of the index and to intensify the seasonal variations.

The index series for the period from 1913 to 1920 rests, therefore, on a smaller basis than since the beginning of 1921. The continuous index, however, implies that, had prices been available for all forty-three articles in the years 1913 to 1920, their combined fluctuation would have been the same as for the twenty-two articles of which the prices were actually recorded in those years. This assumption is to be borne in mind in case it is sought to ascertain by means of present total prices and the computed index number the total price in the base year 1913.[1]

[1] "From 1913 to 1920, the index numbers were uniformly computed from the prices of 22 food articles. In 1921, when the number of articles was increased to 43, the following plan was adopted: It was assumed that the total cost of the 43 articles, if this information had been obtained, would have shown the same percentage of change from 1913 to December, 1920, as was shown by the 22 articles. Therefore, the index number for the 22 articles in December, 1920, which was found to be 177.85, was accepted as the index number for the 43 articles. The money cost of the 43 articles in December, 1920 was found to be $461.51. The ratio of the money cost to the relative cost in December, 1920 was therefore 461.51 to 177.85 or 1 to 0.3854. For each month since December, 1920, the index number has been obtained by multiplying the money cost of the 43 articles by 0.3854. The resulting index numbers are comparable with the index numbers for the years and months prior to January, 1921, on 22 articles." U. S. Bureau of Labor Statistics, "Retail Prices, 1913–1926," Bulletin 445, p. 3.

Housing

The difficulties in the way of collecting rents for houses of identical kind and quality in different places have already been noted. For this reason the Conference Board made no attempt at first to define an exact type of housing. Information was sought rather in regard to "housing such as is usually occupied by wage earners." Later, in 1920, an effort was made to describe more specifically the type of dwelling for which rents were desired. Since that date, the practice has been to secure the approximate average monthly rent of a house or apartment of four or five rooms with bath, for which the heat is not furnished by the landlord, and which is typical of the type of housing usually occupied by wage earners. Within this description there is, it is obvious, room for considerable latitude. The dwellings for which rents are quoted in the different communities may be separate houses or cottages, individual houses in blocks, two-family houses of the semi-detached or duplex types, or flats or apartments in multiple dwellings. In each community, local usage determines the particular type of dwelling which predominates. Inasmuch as the problem here is to determine *changes* in cost, the identity of the dwelling type in the different communities is not so important as the consideration that in each community the same type of dwelling should be continuously reported, and that it should be representative of the type occupied by wage earners.

Clothing

The preparation of a typical list of clothing and the assignment to each article in the list its proper relation to the whole are among the most perplexing problems of detail which confront the investigator of changes in retail prices. When the Conference Board first sought to establish its index, there were available a number of lists of the articles of clothing assumed to represent the minimum requirements of a wage earner's family,[1] but none of these lists was deemed ade-

[1] L. B. More, "Wage Earners' Budgets," New York, 1907, p. 235 ff.; R. C. Chapin, "The Standard of Living Among Workingmen's Families in New York City," New York, 1909, pp. 165–166; J. C. Kennedy, "Wages and Family Budgets in the Chicago Stockyards District," 1914, p. 78; State of New York, Fourth Report of the Factory Investigating Commission, 1915, Vol. IV, pp. 1519–1531, 1660–

quately representative of this group of family expenditures. There was no time in which to make an extensive survey of the subject and an estimate had to be prepared based upon the best information at hand. Accordingly, twenty-five articles of yard goods and wearing apparel were chosen to represent the family requirements, and budgets were constructed to represent the average annual purchases of such articles. Where, as in some instances, a given article of clothing was likely to be used for a period longer than a year, it was represented in the budget not by a complete unit but by a fraction, as, for example, one-third in the case of an article replaced only once in three years.

In the first instance, two budgets were constructed, one of which included a better grade of apparel than the other. It was found that the items which were least expensive in 1914 increased in cost more than those of a better grade. The indexes for the combined clothing of both men and women for the months June and November, 1918 and March, 1919 were calculated with reference to this influence of the cheaper grade of clothing and are not averages of the indexes of men's clothing and women's clothing.

The list of clothing items was increased in November, 1918 to twenty-nine and these articles were retained in the clothing budgets until the beginning of 1929. The yard goods items were not included in the budget estimates but were used for comparative purposes only. No children's apparel was included among the articles priced, since special inquiries conducted in 1918 indicated that the ratio of change in children's clothing followed so closely that of the clothing of adults that the collection and tabulation of prices for children's clothing was unnecessary. The clothing items, their 1914 prices, which indicated the standard of goods called for, and the original budgets and expenditure weights are given in the following tables. Wherever substitutions

1665; New York City, Bureau of Personal Service, Board of Apportionment, "Report on the Increased Cost of Living for an Unskilled Laborer's Family in New York City," 1917, pp. 20–21; Report of Survey Committee to the Dallas Wage Commission, 1917, pp. 15–16; United States, 61st Congress, 2nd Session, Senate Document No. 645, Report on Condition of Woman and Child Wage-Earners in the United States, Vol. XVI, "Family Budgets of Typical Cotton-Mill Workers," Washington, 1911, pp. 145–146, 239–240.

had to be made, they were based upon considerations of price, use and comparability of demand:

Wool Yard Goods	*1914 Price*
Serge	$1.00
Poplin	1.50
Broadcloth	2.00
Cotton Yard Goods	
Percale	.07½
Gingham	.10
Longcloth	.12½
Fruit of the Loom	.15
Voile	.25
Hosiery	
Men's	.15
Women's	.25
Knit Underwear	
Men's union suits	.50
Women's vests	.10
Muslin Underwear	
Women's combinations	1.00
Suits	
Men's	15.00
Women's	15.00

Coats	*1914 Price*
Men's	$10.00
Women's	10.00
Shirts and Blouses	
Men's work shirts	.50
Men's work shirts	1.00
Men's negligee shirts	1.00
Women's blouses	1.00
Men's overalls	.75
Shoes	
Men's	3.50
Women's	3.00
Gloves	
Men's dogskin	1.25
Women's cape	1.00
Hats	
Men's felt	2.00
Women's velvet	1.50
Women's straw	1.00

The original clothing budgets, with prices[1] and with equivalent weights, are as follows:

Man's Budget	*1914 Cost*	*Relative Expenditure Weight*
Suit	$15.00	25.6
Overcoat	10.00	17.0
Heavy trousers	3.50	5.9
Two shirts	2.00	3.4
Two work shirts	1.00	1.7
One work shirt	.75	1.3
Three pairs overalls	2.25	3.8
Shoes	9.00	15.3
Eight pairs hose	1.20	2.0
Three sets underwear	1.50	2.6
Two sets underwear	2.00	3.4
Two night shirts	1.50	2.6
Collars and ties	1.50	2.6
Hats and caps	3.50	5.9
Gloves	1.50	2.6
Sundries	2.50	4.3
All articles	$58.70	100.0

Woman's Budget	*1914 Cost*	*Relative Expenditure Weight*
Coat or suit	$15.00	25.8
Wool dress	5.00	8.6
Wool skirt	2.00	3.4
Two cotton skirts	2.00	3.4
Four waists	4.00	6.9
Two house dresses	2.00	3.4
Aprons	.90	1.6
Shoes	6.65	11.4
Hosiery	1.50	2.6
Corsets	2.00	3.4
Three union suits	1.00	1.7
Three union suits	2.25	3.9
Muslin underwear	3.20	5.5
Three petticoats	1.75	3.0
Three nightgowns	2.40	4.1
One straw hat	1.00	1.7
One velvet hat	1.00	1.7
Gloves	1.50	2.6
Sundries	3.00	5.3
All articles	$58.15	100.0

[1] These budgets were carried out on a basis of money cost on separate dates, until July, 1925. For practical reasons at that time the system of expenditure weights was adopted.

Since January, 1929, a somewhat modified clothing budget has been used in order to take cognizance of changes in consumption. Some of the articles formerly priced have now become obsolete and, on the other hand, certain new articles, for example silk hosiery, have come to be generally used. Recognition of these changes required certain modifications of the original clothing budget. The new budget follows:

	Quantity Weight per Year
Hosiery	
Men's socks	
Cotton	6
Rayon and cotton mixture	3
Wool and cotton mixture	3
Women's hose	
Mercerized cotton	3
Rayon	3
Silk	1
Mixture, wool, rayon and cotton	1
Underwear	
Men's	
Union suits	
Knit, all cotton, heavy fleeced	1½
Nainsook, athletic type	3
Pajamas	
Cotton pongee	¾
Flannelette	½
Nightshirts	
Cotton, Fruit of the Loom	¾
Flannelette	½
Women's	
Union suit, knitted cotton	2
Vests	
Cotton knit	2
Rayon knit	1
Bloomers	
Cotton, jersey knit	2
Rayon knit	1
Corselette, cotton, rayon striped	2
Slips	
Sateen, non-cling	2
Rayon knit	1
Nightgowns	
Cotton, Windsor crêpe	1½
Flannelette	1
Suits, men's	
Serge	½
Cheviot	½

	Quantity Weight per Year
Coats	
Men's	
Sweater, all cotton cardigan jacket	½
Overcoat, herringbone cheviot	⅓
Women's, cloth cheaper grade	
Light weight	⅓
Winter weight	⅓
Dresses	
Cotton house dress, print	3
Silk, crêpe de chine	1½
Wool, jersey	1
Shirts	
Work shirt, blue chambray	3
Shirt, printed percale	2
Overalls, 2–20 denim	3
Gloves	
Men's	
Work, canton flannel	6
Leather, calfskin, unlined	½
Women's	
Chamois cloth	1
Hats, inexpensive	
Men's	
Felt	½
Straw	1
Caps, wool, sateen or cheap satin lining	1
Women's	
Straw or similar type	1
Felt, wool	1
Shoes	
Men's	
Work shoe	2
Oxford, calf skin	1
Women's	
Oxford, calf skin	1½
Pump, patent	1

It should be noted that the weights used in attributing to each article in the clothing budget its proper importance are no longer based on the expenditures for such articles in 1914 but on the quantity estimated to be consumed in one year. This is a slightly simplified procedure and no doubt a somewhat more accurate method since the price element does not enter into it.

It should also be pointed out that while the former clothing questionnaires merely gave the 1914 price of the article for identification, the new questionnaires give rather explicit specifications so as to assure quotations as nearly identical as possible.

Fuel and Light

The fuel and light index is determined on the basis of changes in the cost of coal, gas and electricity. This is a representative group of expenditures rather than a comprehensive one. While there are other articles, such as wood and kerosene, for example, which might be considered in this group, they play such a minor part in the expenditures of urban wage earners that to allow for their consumption and to ascertain their prices would merely add to the labor involved without any compensating gain in the accuracy of the results. Under coal are included three types, bituminous coal sold for household use, stove and chestnut anthracite. Because of the fact that fuel consumption varies in different parts of the United States, considerable difficulty was experienced in determining the importance to be assigned to each type of coal. A thorough examination of the existing estimates, however, led to the conviction that for the United States as a whole the consumption of coal for household purposes was about equally divided between bituminous and anthracite coal.

Gas covers the cost of 2,000 cubic feet and such additional charges as may be commonly involved, as meter rental, etc. Both manufactured and natural gas are covered by the index. According to figures published by the American Gas Association,[1] slightly over one-fourth of all gas customers

[1] New England Utility News, Feb. 3, 1930.

used natural gas in 1929. An index purporting to show changes in the cost of gas throughout the United States, therefore, should also reflect changes in the cost of this type of gas.[1] Inasmuch as the average heating value of natural gas, however, is higher than that of the average manufactured gas, the allowance is 1,000 cubic feet.

The increasing use of electricity for lighting has rendered necessary certain changes in the original budget. In 1914, the homes of working men were usually lit by gas; accordingly, electricity was not recognized in the light index until 1922, when its importance was roughly estimated. Since November, 1923, electricity has been given a weight of one and gas a weight of two. This weighting is not intended to express merely the relative use of electricity and gas for lighting purposes, but takes into account the increasing use of gas for cooking. In 1918 and 1919, efforts were made to collect information in regard to gas and electricity from the trade associations in those industries, but the data which they were able to furnish were not in a form which could be used by the Conference Board. After various experiments, an entirely new system of gathering and computing the figures was devised in November, 1925. Questionnaires were sent to public service commissions and local authorities who were requested to state the net price of 2,000 cubic feet of gas and 20 kilowatt hours of electricity, together with the steps involved in ascertaining the total charge. Similar prices were obtained for 1914, and the index was calculated directly by the comparison of the two costs. This change in the method of securing the facts and computing the index involved a slight break in the continuity of the series. The effect upon the general index, however, was insignificant, since no matter how important the bill from the gas company and electric light company may appear to the consumer, these items are after all a very small element in the total budget. Only when marked changes in rates occur would the total budget be appreciably affected. The method introduced in 1925 is still used, although beginning with January,

[1] For further discussion, see pp. 117, 119.

1930, the allowance of electricity was increased to a 35 kilowatt hour basis.

Sundries

The selection of suitable commodities and services to represent changes in the cost of the miscellaneous expenditures called "sundries" presents even more difficulties than are encountered in the choice of lists representing the other groups of expenditures mentioned. The sundries group, as a whole, it must be remembered, constitutes about a fifth of the total wage earner's budget.

When the index was first started, in June, 1918, the Conference Board was compelled to make arbitrary estimates of the changes in price which the various items comprising the sundries group had undergone. In time, a more standardized list of items to be priced, together with weights for each item, was devised. In Chapter I it was pointed out that in the construction of this group the element of personal judgment plays a larger part than elsewhere. It is believed, however, that the list which follows is sufficiently indicative of the composition of the group to serve as a basis for calculating changes in the price level of the group as a whole. The expenditure weights were calculated after a careful examination of a number of family budgets and were based upon an allowance of $4.25 per week in 1914, distributed as follows:

Item	Amount Per Week	Expenditure Weight
Carfare	$0.25	5.88
Medical		
Doctor	.35	8.24
Drugs and toilet articles	.15	3.53
Reading material	.60	14.12
Recreation	.45	10.59
Insurance	.50	11.76
Furniture, furnishings, supplies	.60	14.12
Church, charity, gifts	.50	11.76
Organization dues	.35	8.24
Candy	.10	2.35
Tobacco	.40	9.41
	$4.25	100.00

The commodities or services included under each one of these headings in 1929 are as follows:

- Carfare
  - Street-car fares
- Medical
  - Physician fees
  - Drugs and toilet articles
    - Talcum powder
    - Toothpaste
    - Cold cream
    - Soap (2 kinds)
    - Shaving cream
    - Safety razors
    - Listerine
    - Aspirin
    - Castor oil
    - Castoria
    - Nujol
- Reading material
  - Newspapers
  - Magazines (25 kinds)
- Recreation
  - Motion picture theatre admission
- Insurance
- Household furnishings
  - Household linen and draperies
    - Sheets
    - Pillow cases
    - Table linen
    - Towels (2 kinds)
    - Blankets (3 kinds)
    - Curtain materials (3 kinds)
    - Curtains
  - Furniture
    - Dining table
    - Chairs
    - Dresser
    - Buffet
    - Bedstead
    - Bedsprings
    - Mattress
    - Kitchen table
  - Rugs
    - Axminster
    - Wool and fibre
    - Linoleum
    - Congoleum
  - China (2 types of sets)
  - Miscellaneous
    - Broom
    - Double boiler (2 kinds)
    - Paring knife
- Church, charity, gifts
- Organization dues
  - Knights of Columbus
  - Eagles
  - Maccabees
  - Modern Woodmen of America
  - Odd Fellows
- Candy (4 kinds)
- Tobacco
  - Cigars (2 kinds)
  - Cigarettes (3 kinds)
  - Tobacco (2 kinds)

Methods of Collecting and Combining Current Prices

There are, as previously pointed out, various ways in which prices may be collected and combined into an index. Frequently the choice of method is dependent on practical rather than theoretical considerations. The nature of the material and the circumstances surrounding the collection of the prices usually dictate the choice of one or another method in the computation of the indexes of the various types of items. In order to describe the entire method followed by the Conference Board, therefore, each major group of expenditures will first be discussed separately and then it will be shown how the total index is derived. It should be noted at the outset that the index number applies only to urban wage earners. The obvious reason for this limitation is the fact that the vast majority of industrial workers live in urban communities. The agricultural worker and other dwellers in small communities, who very often produce

a considerable part of the food they consume, do not have the same distribution of money expenditures as workers who dwell in cities. A further reason for confining the investigation to the larger cities in the urban group lies in the fact that, for some of the workers in industry, conditions in smaller cities approximate those found in villages and rural communities.

Food Prices

The index number for food used by the National Industrial Conference Board is that computed by the United States Bureau of Labor Statistics, which is derived by a monthly survey of retail prices of forty-three articles of food in fifty-one cities.[1] These cities represent the larger[2] cities throughout the United States, though only sixteen of them lie west of the Mississippi River and 64% of the total population of all the cities covered reside in sixteen cities located in the Middle Atlantic and East North Central groups.

The cities in which food prices are collected are:

North Atlantic
Boston, Mass.
Bridgeport, Conn.
Buffalo, N. Y.
Fall River, Mass.
Manchester, N. H.
Newark, N. J.
New Haven, Conn.
New York, N. Y.
Philadelphia, Pa.
Pittsburgh, Pa.
Portland, Me.
Providence, R. I.
Rochester, N. Y.
Scranton, Pa.

North Central
Chicago, Ill.
Cincinnati, O.
Cleveland, O.
Columbus, O.
Detroit, Mich.
Indianapolis, Ind.
Kansas City, Mo.
Milwaukee, Wis.
Minneapolis, Minn.
Omaha, Neb.
Peoria, Ill.
St. Louis, Mo.
St. Paul, Minn.
Springfield, Ill.

Western
Butte, Mont.
Denver, Colo.
Los Angeles, Cal.
Portland, Ore.
Salt Lake City, Utah
San Francisco, Cal.
Seattle, Wash.

South Atlantic
Atlanta, Ga.
Baltimore, Md.
Charleston, S. C.
Jacksonville, Fla.
Norfolk, Va.
Richmond, Va.
Savannah, Ga.
Washington, D. C.

South Central
Birmingham, Ala.
Dallas, Tex.
Houston, Tex.
Little Rock, Ark.
Louisville, Ky.
Memphis, Tenn.
Mobile, Ala.
New Orleans, La.

[1] For list of food articles chosen, see p. 36 of this volume.

[2] Butte, Montana, with a population of 41,611 according to the 1920 census, is the smallest city included.

Retail prices of food are secured from various types of stores, selected by agents of the Bureau, which cater to the wage-earning population of each city. These include neighborhood stores, "downtown" stores, and chain stores, some of which give credit and deliver goods and some of which do not. As the character of the locality changes or cooperators drop out, new stores are selected comparable with those formerly in the survey. The numbers of quotations secured from each city are roughly apportioned according to the size of the city, an effort being made to secure from twenty to thirty quotations on each article of food in the larger cities and from ten to fifteen in the smaller communities.

Each year the Bureau forwards to its cooperators three sets of booklets with twelve duplicate questionnaires, together with franked envelopes. The most complete booklet lists forty-one articles; the second calls for prices on fresh milk, butter, eggs and hens, while the third provides an elaborate schedule for bread in order that its price may be reduced to a common weight basis. Each dealer is asked to fill out the questionnaire on the fifteenth of the month for the same grade of articles on which he quoted prices the previous month. Those for which no trade names are given may be identified by reference to the carbon copy of the previous month.

The prices are actual selling prices which prevail on the fifteenth of the month to which the questionnaire relates. When these questionnaires are received by the Bureau, they are carefully edited for any discrepancies, and necessary substitutions or alterations are made. The average money price for each commodity is secured by a summation of the prices quoted by all the dealers, divided by the number of dealers reporting the price of each article, some 1,800 in all. These prices are then weighted according to their importance in the average family budget of 1918 and are related to the average price for the base year 1913.

Rents

In order to ascertain the trend of rents paid by wage earners, questionnaires are sent by the National Industrial Conference Board each month to real estate boards, cham-

bers of commerce, social agencies and to certain individuals who are in close touch with the rental situation of their particular locality. Each cooperator is asked to indicate the "approximate average monthly rent for a house or apartment of four or five rooms, with bath, heat not furnished by the landlord, such as is usually occupied by wage earners." As a basis of comparison, the quotation for the middle of the previous month is always entered on the questionnaire before it is sent to the cooperator.

The number of cities and cooperators furnishing data for the index are shown in detail in Table 4. During the three years prior to 1929 an average of 504 reports was received from an average of 177 cities located in all sections of the United States. During that period every city with a population of 100,000 or over was included as well as many cities with populations ranging from 10,000 to 100,000.

In the beginning of 1929 slight revisions were made in the list of cities covered in the survey. One reason for change was the fact that in some cities it was becoming more and more difficult to determine average rents for wage earners' dwellings. Another reason was the desire to include as far as possible only those cities for which quotations in regard to other items in the cost of living were ascertained. Altogether, 173 cities are now represented, 63 of which are in the East, 38 in the South, 56 in the Middle West and 16 in the Far West. The average number of cities reporting during the year 1929 was 170 and the average number of reports received from them was 548. All but four of the cities in the United States with a population of 100,000 or over are included in the survey. The other cities covered by the study range in size from 25,000 to 100,000. Almost one-third of the population of the entire United States is represented in the cities from which rent data are secured.

The computation of the index for the country as a whole is carried out as follows. First, for each one of the quotations received the percentage of change from the previous month is found. These percentage changes are averaged for each city and an index is determined for each city by linking the average percentage change to the index number of the previous month, which is computed on the base of December, 1928

TABLE 4: NUMBER OF REPORTS AND NUMBER OF CITIES[1] FROM WHICH REPORTS WERE RECEIVED FOR HOUSING, CLOTHING AND FUEL SINCE MARCH, 1920

(Source: National Industrial Conference Board)

	Housing		Clothing		Fuel	
	Reports	Cities	Reports	Cities	Reports	Cities
1920						
March	355	156	208	72	121	44
July	359	158	203	75	115	43
November	461	167	166	67	151	56
1921						
March	479	165	200	74	166	61
July	467	167	191	78	173	62
November	490	164	196	77	179	65
1922						
March	476	165	189	70	179	62
July	481	168	186	75	165	59
November	471	164	186	74	164	60
1923						
March	470	164	198	87	171	63
July	448	161	183	78	171	61
November	613	181	170	80	170	60
1924						
March	574	178	194	80	168	63
July	568	178	176	78	169	63
November	572	177	172	78	169	65
1925						
March	566	180	209	93	165	64
July	558	179	203	94	158	62
November	549	178	187	91	127	53
1926						
March	486	179	172	82	144	61
July	493	179	170	81	163	61
November	503	179	167	85	164	64
1927						
March	499	177	163	81	167	64
July	490	178	154	79	166	62
November	504	176	149	79	166	63
1928						
March	504	179	155	80	161	62
July	494	175	115	70	158	62
November	572	178	115	64	213	64
1929						
March	531	170	144	73	285	94
July	542	169	140	78	282	91
November	567	173	140	80	291	95

[1] For the total number of cities included in the study, see pp. 49, 52, 54, 55 of this volume.

as 100. The cities are then divided into five groups on the basis of population and an index for each group is found by taking the simple average of the indexes of the cities within each group. These group indexes are weighted on the basis

of the total population in cities of each class in the United States to form the general index of rents. After this general rent index is obtained on the December, 1928 base, it is multiplied by the December, 1928 index on a July, 1914 base, thus deriving the new index on the 1914 base.

The population groups, their respective weights and the number of cities in each are:

Group	Population	Weight	Number of Cities
1	500,000 and over	43.34	12
2	250,000–500,000	12.02	12
3	100,000–250,000	17.26	39
4	50,000–100,000	13.94	67
5	50,000 and less	13.44	43

Since rent fluctuations within various parts of a city differ considerably, it has never been considered advisable to publish a single index number for each city, though for practical purposes the index for the country as a whole is expressed as a single figure. The index number quoted for the United States as a whole is not to be applied to any particular locality without reservation. The influence of local considerations may make the index exaggerate or minimize the rent fluctuations of any single city.

Clothing Prices

Since the beginning of 1929, retail prices of forty-seven representative articles of clothing have been collected each month by the questionnaire method. As pointed out before, the 1914 price of each article was formerly entered on the questionnaire for purposes of identification before it was sent to the cooperator. Now more definite specifications are given in order to assure greater uniformity in the articles priced, for example, women's "vests, rayon, knit 36 gauge," or men's "union suit, nainsook, athletic type, 72–80." These specifications were adopted after extensive inquiries were made by the Board in regard to the type of articles most commonly used by wage earners. As a further aid to maintaining comparability from month to month the prices of the previous month are entered on the questionnaire before it is sent to the cooperator. The questionnaires call for retail prices on regular stock for the fifteenth of the month. No

"cut rate" or "special sale" prices are to be quoted. The returns are always carefully scrutinized in order to detect and eliminate prices which are obviously for goods above or below the standard required. Wherever several prices for any article are quoted by any merchant, a simple average price is calculated.

At present 90 cities are represented in the monthly clothing surveys. All but one of these cities have a population of over 25,000, and 57 of them have a population over 100,000. Geographically they are distributed as follows: 32 in the East, 21 in the South, 28 in the Middle West and 9 in the Far West. In 1929 an average monthly return of 142 reports was received from an average of 76 cities.

In order to calculate the index number of clothing, an average price for each article is first obtained by taking the simple average, i. e., the arithmetic mean of all available quotations for each article. These average prices are then multiplied by the quantity of each article assumed to be used in one year and the products are added, thus securing the total cost of a given quantity of goods at prices prevailing at the time of investigation. This is done separately for women's and men's clothing. In order to obtain the index of clothing a linking system had to be resorted to, inasmuch as various new articles of clothing are now priced for which no 1914 prices are available. This method of linking assumes that the trend of clothing prices as determined on the basis of the old budget was along similar lines as that of the new budget. For the month of December, 1928 an index of clothing—men's and women's separately—was computed on the old basis. There was also computed the aggregate cost of the new budget. By dividing this cost by the index established on the old basis, therefore, it is possible to determine what the aggregate cost of the new budget would have been in 1914. Again, by dividing the aggregate cost on the current date by the corresponding cost in the base period, an index can be secured. This is in effect the method used, although instead of following this procedure exactly, a constant was determined on this basis by which the aggregate costs each month are multiplied. This is merely a simplified mathematical procedure. After the indexes for men's cloth-

ing and for women's clothing have been ascertained, a simple average of the two constitutes the index for clothing as a whole.

The procedure formerly followed was somewhat different. An average price for each of the twenty-nine articles was calculated as the average of all available quotations and the per cent of change from the fifteenth of the previous month was ascertained. These percentages were then linked to the index of each article for the past month, based on July, 1914 as 100. Since only the more important articles which make up the total clothing budget were priced each month, indexes for the remaining articles were calculated on the basis of these. For example, the index representative of a wool skirt was based on the average of the indexes of a woman's coat and suit, while that of a pair of trousers was based on the average of the indexes of a man's suit and coat. These computations were not arbitrary, as were those for collars and ties and clothing sundries for men and women, which were a fixed percentage of the respective clothing budgets of the previous month, but were based on careful analysis of the materials and market conditions involved for each item. The indexes, with the exception of those for yard goods, were weighted on the basis of an expenditure distribution established in July, 1925.[1] The average of the indexes for men's and women's clothing gave the total index for clothing.

It may be noted that no articles of children's apparel are priced. The assumption is made, on the basis of previous studies, that the variations in price of young children's and girls' clothing are similar to those of women's clothing and that variations for boys' clothing are similar to those for men's clothing.

Fuel and Light

Coal: Three types of coal are included in the National Industrial Conference Board's index of retail fuel prices, namely, stove and chestnut sizes of anthracite, and bituminous coal. The monthly questionnaires request dealers throughout the country to quote the retail cash prices on ton lots. For bituminous coal the quotations requested are those

[1] See p. 41 of this volume.

for such grades as are most frequently sold for household use in the city in question. It is possible that the quotations received for this type of coal may be based on a variety of grades, but all of them represent grades used for household purposes as contrasted with those which serve commercial needs.

Since the beginning of 1929, coal prices have been collected from ninety-five cities. When the first investigation was made in 1918, the fuel index was based on the replies to questionnaires from twenty-two dealers in twenty-one cities. Since then the number of cities represented has been increased to the present coverage. In 1929 an average monthly return of 286 reports was received from an average of 94 cities. All of the 95 cities have a population of over 25,000, and 58 of them have a population of over 100,000. Geographically they are distributed as follows: 33 in the East, 23 in the South, 29 in the Middle West and 10 in the Far West. A list of these cities is given in Table 16.

After the questionnaires are carefully edited, all the prices for each of the three varieties of coal received from all of the cities are totaled for the current and the preceding month and the percentage change between the two dates ascertained for each variety. A simple average of the percentage changes for stove and chestnut gives the change for anthracite,[1] and in turn a simple average of the percentage change of anthracite and that of bituminous coal gives the average percentage change of coal as a whole. This change is then applied to the coal index of the preceding month, and thus the index for coal for the country as a whole is obtained with July, 1914 as base.

Indexes are also computed for each city for each one of the three kinds of coal separately, but not for the three kinds combined. The method followed is similar to that for the country as a whole, i. e., all prices secured for each of the three kinds of coal from each city are totaled for each city and the percentage change from the preceding month determined. This is applied to the index for the previous month in order to secure the index with July, 1914 as base.

[1] Where anthracite is used for domestic purposes, about equal quantities of stove and chestnut are consumed.

Though the cities are divided into four groups, representing four geographical divisions, and a linked index is computed for each division, the total index is not weighted according to population except in so far as the number of reports received from each section of the country gives an indirect form of weighting.

Gas and Electricity: In measuring the changes in the cost of gas and electricity, it has been assumed that 2,000 cubic feet of gas[1] and twenty kilowatt hours of electricity[2] per month represent the average amount used by wage-earning consumers in 1914. The efforts to ascertain the cost of identical quantities of gas and electricity on different dates have encountered numerous difficulties. The last few years have witnessed many changes in the methods of calculating the consumption of gas and electricity. Step-rates, coal charges, area bases, demand charges and other unique systems have been introduced.[3] The present questionnaires of the Conference Board request information regarding the net rate per 1,000 cubic feet of gas and per kilowatt hour of electricity, together with any extra charges which may be involved in securing the total quantities of average monthly consumption.

Questionnaires are distributed at the beginning and the middle of each year to public service commissions, mayors and private utility companies in 174 cities. With one exception, these cities are identical with those from which rent quotations are secured.[4] Index numbers for gas and electricity are calculated separately for each city. In earlier years this was done by relating the current costs directly to the July, 1914 costs. Now a link system is used. The percentage change between the current and preceding date is determined and applied to the index of the preceding date with June, 1928 as base. The cities are grouped into five classifications according to population and for each of these groups an index is computed by taking the simple average of the

[1] See pp. 43–44, 117–119 for a discussion of natural gas.

[2] Beginning with January, 1930, the number of kilowatt hours was increased to thirty-five.

[3] See, "Cost of Living in the United States, 1914–1926," pp. 48–49.

[4] See pp. 119, 126, and Table 18 of this volume.

indexes for each city within the respective groups. These group indexes are then weighted on the basis of the population of all cities in the United States that fall within these groups. The system of weighting corresponds exactly to that used for rent. This index with June, 1928 as base is then multiplied by the June, 1928 index with July, 1914 as base, thus obtaining the current index on the 1914 base. To obtain the index for light for the United States as a whole, the index for electricity and the index for gas are weighted by one and two, respectively.

Combined Index: The index for fuel and light is the weighted average of the fuel index and the light index, obtained by multiplying the former by 3.7 and the latter by 1.9 and dividing the sum of these two weighted indexes by the sum of the weights, i. e., by 5.6.

Sundries

The range of goods and services outside of the primary necessities, such as food, housing, clothing and fuel and light for which families spend their income, is such a wide one that measurements of changes in the cost of the sundries group into which these miscellaneous items have been classified is a rather difficult task. The selection of representative items is necessarily arbitrary. Eleven classes of items have been chosen by the Conference Board as representative of the whole group called sundries and each of these is composed of a varying number of goods or services. To collect and compute price changes for all of these items is laborious and expensive, and therefore short cuts are employed wherever possible and consistent with reasonable accuracy.

Carfare: At present, changes in carfare rates in 284 cities[1] with a population of at least 25,000 are obtained from monthly bulletins issued by the American Electric Railway Association. Of these cities, 68 have a population of over 100,000; 76, between 50,000 and 100,000, and 140 between 25,000 and 50,000. Geographically they are distributed as follows: 112 in the East, 46 in the South, 101 in the Middle West and 25 in the Far West. The various changes that

[1] The number was formerly slightly larger, but because of discontinuance of service a few cities had to be dropped from the study.

have been made since 1914 in carfare rate systems have rendered this item difficult to measure. Tokens or tickets at reduced rates have replaced cash fares; zone limits have been devised or abolished; transfers added free or with a charge, or the privilege of transferring has been completely denied. These comprise a few of the obstacles to measurements of price changes in this item. The National Industrial Conference Board has found it necessary, therefore, to base its calculation on a number of assumptions: first, that where tokens or tickets are issued, they will be used; second, that transfers are not used; and third, that an average ride within a city involves but one zone.

The cities are grouped into five divisions on the basis of population, and an index for each city is calculated directly from the 1914 figure. A simple average of the indexes for each city within the respective groups gives the index for each group and these group indexes are multiplied by the population weights,[1] the products totaled and the sum divided by the sum of the weights. The resulting figure is the index of carfare for the United States as a whole.

Medical Care—Physicians' Fees: The difficulties confronting measurements of changes in expenditures for physicians' fees and the fact that such expenditures do not undergo violent fluctuations have led to the practice of ascertaining in detail such changes at somewhat longer intervals and using the results so obtained as a fixed quantity until the next special inquiry is made. Thus since November, 1925, a fixed figure has been used for this expenditure. Investigagations were made previous to this date in an effort to obtain regular channels of information for this item, but the results were unsatisfactory. The returns, however, were sufficient to permit an estimate of the increase over the year 1914. Another special inquiry is contemplated within the near future.

Drugs and Toilet Goods: Twelve articles[2] are included in this group, for which prices are obtained each month from the New York office of a large chain-store concern. The average price of each article is weighted according to its estimated importance in the 1914 budget, and these weighted

[1] These are the same as for rent; see p. 51. [2] See p. 46 for these articles.

prices are then totaled and related to the similar total for December, 1928, which in turn is linked to July, 1914. The procedure is similar to that followed in the computation of the clothing index.[1]

Reading Material: This item is now represented by expenditures for newspapers and magazines. Formerly only the latter were included. Newspaper prices are obtained twice a year directly from the newspaper offices in forty-nine cities and are for dailies sold on the streets or news-stands within the city limits. The magazine prices refer to twenty-four weekly and monthly periodicals and are secured twice a year from the *American News Trade Journal.* They represent news-stand or street sale prices throughout the United States. Indexes are first computed separately for newspapers and magazines by determining the percentage change in the aggregate price of all of the newspapers and all of the magazines, respectively, as compared with the preceding date of investigation. This percentage change is linked to the index of the preceding date, which has June, 1928 as base. To secure the index of reading material as a whole, the two indexes are combined by weighting newspapers two and magazines one. This index, which is still on a June, 1928 base, is multiplied by the index of June, 1928 on a July, 1914 base. The latter, it will be recalled, was based only on magazine prices. Formerly, magazine prices were secured monthly. Since these prices are not subject to considerable variation from month to month, however, and the influence on the total budget is very small, it has been found advisable to determine the changes only twice a year and to use the same index during the interval.

Recreation: In former years a procedure similar to that followed for physicians' fees was employed.[2] Now, however, motion picture admission prices are secured regularly in October of each year. These charges are obtained from four of the leading motion picture theatre chains for 39 cities. The cities selected are those having a considerable industrial population; 21 of them have a population over 100,000 and 18 a population between 25,000 and 100,000. Nineteen of

[1] See pp. 52–53 of this volume.

[2] See p. 57 of this volume.

the cities are in the East, six in the South, six in the Middle West and eight in the Far West. The questionnaires specify that the theatres to which the prices refer must be those frequented by wage earners and that, if the theatre has a scale of prices, the admission charge quoted should be for a balcony seat for the usual evening performance. Whenever there is more than one theatre of this type in a city, it is requested that the charge reported be an average of the various charges. To compute the index, the prices for each city are added and the percentage change is determined between this aggregate price and the aggregate price of the preceding date. The percentage change is then applied to the index of the preceding date, and in this manner the new index with July, 1914 as a base is obtained.

Insurance and *Church* and *Charity* contributions have been estimated in such a way as to maintain these expenditures at a level approximately the same in purchasing value as was assigned to the items in 1914.

Household Furnishings: Formerly, this index was made up from certain information secured on the clothing questionnaires. Actual prices were secured on five types of yard goods, taken as representative of household draperies and supplies. For brooms and brushes, china and crockery, glassware, kitchen utensils, carpets and rugs, and furniture, the merchants were requested to estimate the percentage of change in retail prices of each of these groups since the preceding month. Now, actual prices of thirty articles[1] are collected each month, representing household linen and draperies (twelve articles), furniture (eight articles), floor covering (four articles), china (two types of sets) and kitchen utensils (four articles). For each article an average price is determined by taking the simple average of all the quotations secured. By relating this average price to the corresponding average price of each article on the preceding date the percentage change is determined between the two dates, and this is applied to the index of the preceding date with December, 1928 as base. A simple average of all the indexes within each group determines the index for each group. The group indexes are then multiplied by their respec-

[1] See p. 46 for these articles.

tive weights, the resulting products added and the sum divided by the sum of the weights. The group weights are: household linen and draperies, three; furniture, three; floor covering, two; china, one; and kitchen utensils, one. The resulting index has December, 1928 as base. By multiplying this index by that secured for December, 1928 on a July, 1914 base, the new index with July, 1914 as base is derived.

Organization Dues are obtained once a year, in June, for five organizations. The average dues of all the organizations are added, the total price compared with the corresponding price of the preceding date and the percentage change applied to the index number of the preceding date, which yields the new index on the July, 1914 base.

Tobacco: Prices of two kinds of cigars, three kinds of cigarettes and two kinds of tobacco are secured each month from the New York office of an extensive system of chain stores which operates throughout the United States. The percentage of change in the aggregate cost of these articles since the preceding month is linked to the index of the preceding month to obtain the current index number.

Candy: Prices are obtained monthly for four kinds of candy from the same chain-store system which supplies the prices of drugs. The index is obtained by computing the percentage change between the current and preceding date and linking this to the index of the preceding date.

Combined Index: The indexes of each of the eleven groups having been ascertained, each is weighted by an expenditure weight based on the importance of the item in the 1914 budget[1] to establish the total sundry index for the month.

It will be noted that in the computation of various indexes some period in 1928 is used as the means of linking the indexes to the July, 1914 base. This is done in consequence of the revision of part of the budget and the inclusion of a number of new cities at the beginning of 1929.

The Total Cost of Living

After the indexes representative of the price changes of each of the five major items have been calculated, a weighted

[1] For the determination of those weights, see p. 45 of this volume.

average of these indexes is taken to represent changes in the cost of living as a whole as compared with July, 1914. This is done by multiplying each index by the relative importance each group has in the total budget, adding the products obtained and dividing the resulting sum by 100, i. e., dividing by the sum of the weights. The procedure is illustrated in Table 5.

TABLE 5: METHOD OF COMPUTING NATIONAL INDUSTRIAL CONFERENCE BOARD INDEX OF THE TOTAL COST OF LIVING

Base, July, 1914 = 100

(Source: National Industrial Conference Board)

Item	Weight in Budget[1]	Index Numbers December, 1929	Col. 2 × Col. 1
Food	43.1	158.0	6809.8
Housing	17.7	158.8	2810.8
Clothing	13.2	168.9	2229.5
Fuel and light	5.6	161.9	906.6
Sundries	20.4	168.6	3439.4
Total	100.0	..	16196.1
Weighted average of all items (Total of col. 3 ÷ total of col. 1)	..	162.0	..

[1] For the determination of those weights, see p. 34 of this volume.

The following chapter gives in detail the results secured in measuring changes in the cost of living by the methods described above. It may be noted that it is not always possible to follow the same degree of completeness and refinement in measuring changes in the cost of each one of the component parts of a family budget. But, on the whole, the points at which the strict accuracy of the procedure might be questioned concern matters which are only of minor significance as regards the total cost of living. In such minute details a considerable error might exist without appreciably affecting the accuracy of the total result.

When a commodity or service represents, as many of them do, only a small fraction of one per cent of total family expenditures, any inaccuracy in the ascertainment of its price changes becomes scarcely perceptible in its influence upon the total estimate.

Although space is lacking here to demonstrate the fact in

detail, it may be noted that the index figures of the National Industrial Conference Board are in their general trend in substantial accord with those of the Massachusetts Commission on the Necessaries of Life and of the United States Bureau of Labor Statistics.[1]

[1] The Conference Board report, "The Cost of Living in the United States, 1914–1926," gives not only a detailed account of how each of these indexes is constructed, but also a careful comparison of the results of each index with the index of the National Industrial Conference Board, notes similarities and explains such slight divergence in detail as may be observed. See also pp. 145, 146, 147 of this volume for index numbers and charts of both series.

CHAPTER III

CHANGES IN THE COST OF LIVING, 1914 THROUGH 1929

IN this chapter it is proposed to review the changes that have taken place during the course of time in the cost of commodities and services entering into household expenditures of wage earners, as ascertained in the manner described in the preceding chapter. When studying the movements of the separate groups of expenditures or individual commodities or services, it is well to compare them with the changes in the total cost of living, as this affords a standard by which to measure the deviations from the general trend of prices. The chief results are shown in Table 6 and are illustrated in Charts 1 and 2.

The Total Cost of Living

A study of the trend of retail prices during the years 1914–1929, as revealed by the "all items" indexes, shows four distinct periods in the price movement: first, a very sharp upward movement from July, 1914 to July, 1920,[1] when the level was more than twice that of July, 1914; second, a downward trend until March, 1922, at a more accelerated pace than the preceding rise but not falling to the level of 1914; third, another upward movement until November, 1925 at a much slower rate than either of the two preceding trends; and fourth, a slight recession. Very little deviation from the general trend was discernible in the first two periods, while during the later years the deviations were more frequent and pronounced. This may be partially explained by the fact that since 1925 comprehensive investigations are undertaken each month and, therefore, seasonal variations are reflected in the later figures. Yet there is no doubt that even if monthly investigations had been made in the earlier

[1] The upward turn actually did not begin until the second half of 1915.

TABLE 6: INDEXES OF THE COST OF LIVING IN THE UNITED STATES, ON SPECIFIED DATES, JULY, 1914 TO DECEMBER, 1929, BY MAJOR ITEMS[1]

Base, July, 1914 = 100

(Source: National Industrial Conference Board)[2]

Date	All Items	Food[2]	Housing	Clothing	Fuel and Light	Sundries
1914						
July	100.0	100.0	100.0	100	100	100
1915						
July	100.5	100	100.0	103	102	100
1916						
July	108.7	111	101.5	120	104	104
1917						
July	131.3	146	105	143	126	117
1918						
June	152.2	162	115	177	135	150
November	165.0	183	120	193	140	155
1919						
March	160.5	175	122	181	142	155
July	172.2	190	128	200	142	163
November	182.2	192	138	235	148	175
1920						
March	194.8	200	149	277	149	183
July	204.5	219	158	266	166	185
November	193.1	193	166	228	200	192
1921						
March	168.7	156	171	174	187	185
July	163.1	148	169	164	179	185
November	163.0	152	169	161	179	178
1922						
March	154.7	139	165	154	174	174
July	155.6	142	165	154	174	172
November	158.4	145	167	160	186	171
1923						
March	159.2	142	170	168	186	173
July	161.9	147	175	170	176	173
November	165.3	151	180	174	176	174
1924						
March	162.9	144	185	174	172	174
July	161.7	143	186	171	166	173
November	165.2	150	184	173	168	175
1925						
March	165.3	151	182	173	169	175
July	168.7	160	179	175	165	175
November	171.8[3]	167	178	176	167[3]	175
December[4]	171.4[2]	166	177	177	166[3]	176
1926						
January	170.4[3]	164	177	176	166[3]	176
February	169.5[3]	162	177	176	169[3]	175
March	168.5	160	177	176	166	175

[1] See also p. 190 of this volume.

[2] Food index from the U. S. Bureau of Labor Statistics, Base, 1913 = 100.

[3] This figure includes an estimate of changes in the cost of fuel, based on prices of anthracite substitutes.

[4] Beginning in December, 1925, the cost of living index for all months was placed on an identical basis, instead of those for March, July and November being on a more comprehensive scale than those for intervening months. The December, 1925 figures are, therefore, strictly comparable with figures for other months in the table.

TABLE 6: INDEXES OF THE COST OF LIVING IN THE UNITED STATES, ON SPECIFIED DATES, JULY, 1914 TO DECEMBER, 1929, BY MAJOR ITEMS[1] (*Concluded*)

Base, July, 1914 = 100

Date	All Items	Food[2]	Housing	Clothing	Fuel and Light	Sundries
April	168.6	162	176	175	162	174
May	168.0	161	176	175	158	174
June	167.4	160	176	174	158	174
July	166.0	157	176	173	158	174
August	165.3	156	175	173	160	173
September	166.8	159	175	174	161	173
October	167.2	160	174	173	163	174
November	168.2	162	174	173	170	173
December	168.4	162	173	174	169	174
1927						
January	166.9	159	173	173	168	174
February	165.2	156	172	172	167	174
March	164.1	154	172	172	166	173
April	163.7	154	171	172	161	173
May	163.7	155	170	171	160	173
June	164.8	159	169	169	160	172
July	162.2	153	168	169	160	173
August	162.0	152	169	170	161	172
September	162.8	154	168	171	162	172
October	163.7	156	167	170	163	173
November	164.2	157	167	171	163	173
December	163.6	156	166	171	163	173
1928						
January	163.1	155	166	172	163	172
February	161.5	152	165	171	163	172
March	161.1	151	165	173	163	171
April	160.8	152	163	171	160	171
May	161.5	154	163	171	158	171
June	160.9	153	162	171	158	171
July	161.1	153	161	174	158	171
August	161.4	154	161	173	159	171
September	163.4	158	161	174	160	171
October	162.9	157	161	173	161	171
November	162.6	157	160	172	162	171
December	162.0	156	160	170	163	171
1929						
January	160.9	154.6	159.4	168.9	162.6	170.0
February	161.0	154.4	159.2	170.1	162.4	170.1
March	159.8	153.0	159.4	166.1	162.3	169.7
April	159.3	151.6	159.5	168.1	159.6	169.5
May	159.4	153.3	159.5	167.0	156.6	168.1
June	160.0	154.8	159.4	166.8	156.5	168.3
July	161.6	158.5	159.3	166.2	157.0	168.7
August	162.9	160.2	159.4	169.2	157.7	169.1
September	163.2	160.8	159.9	167.7	159.4	169.1
October	163.4	160.5	159.6	168.4	161.2	170.0
November	163.0	159.7	159.3	168.0	161.6	170.1
December	162.0	158.0	158.8	168.9	161.9	168.6

[1] See also p. 190 of this volume.

[2] Food index from the U. S. Bureau of Labor Statistics, Base, 1913 = 100.

period, the extraordinary upward trend during the war and the immediate post-war period, particularly from 1916 on, as well as the definite deflation process in subsequent years, were stronger than any seasonal influence in one or the other direction. The magnitude of the changes in the price level during the four periods into which the years from 1914 to 1929 appear to fall may be gauged by the range of the fluctuations within each period. In the first period the change from the starting point to the high was 104.5%; in the second, the decline from the high point to the low was 24.4%; in the third, the rise from the low point to the high was 11.1%; and in the fourth, the drop amounted to 7.3%. Disregarding seasonal variations, the recent years have been characterized by relative stability in the level of retail prices. During the last four years the monthly fluctuations have been between 59% and 70% above the July, 1914 level. When averages for the whole year are taken, the fluctuations are naturally even less. During the last four years they have been between 61% and 68% above July, 1914.

The yearly averages of the "all items" indexes have been as follows:[1]

1918	158.6	1924	163.4
1919	171.6	1925	167.8
1920	196.7	1926	167.9
1921	165.7	1927	163.9
1922	156.3	1928	161.9
1923	161.3	1929	161.4

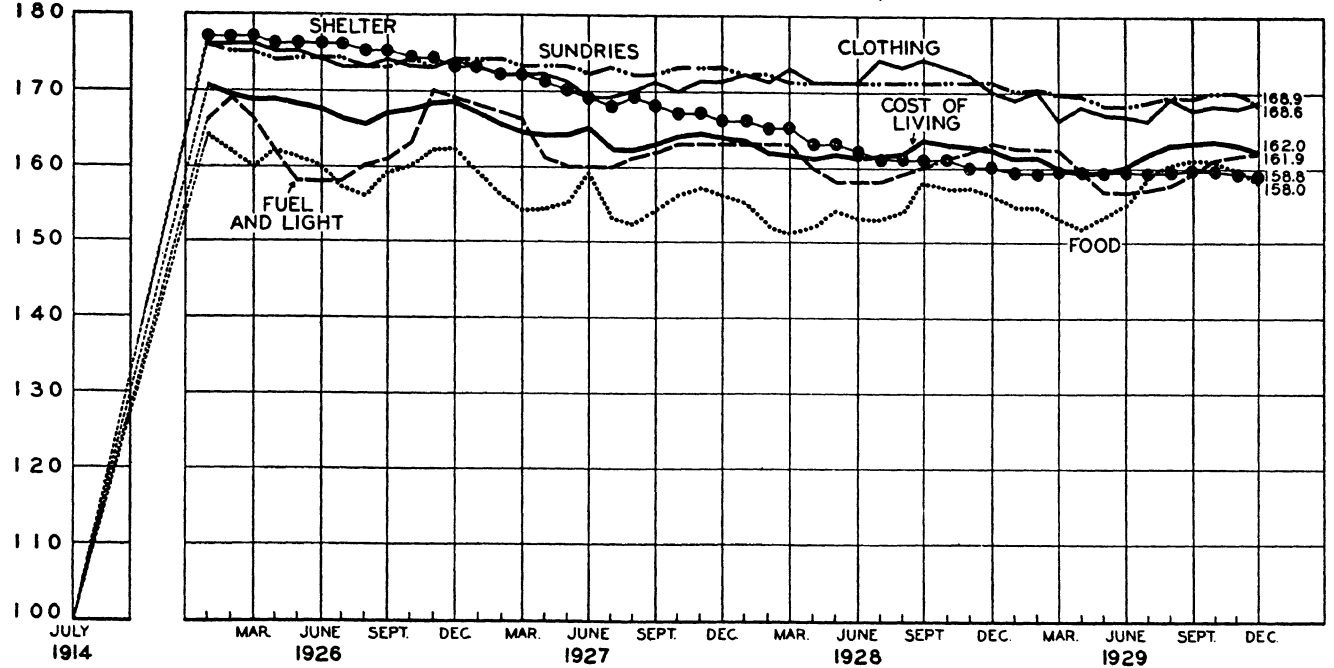
In the year 1929, the total cost of living fluctuated somewhat, but probably not any more than might be expected from the seasonal variations of the prices of some of the commodities. In January, the index of the total cost of living was 160.9, or slightly below the average for the year. An almost imperceptible rise took place in February and then a drop through April followed by a rise until October. This rise, however, did not exceed the average for the year until July. In November and December, prices receded again, although they were still slightly above the year's average.

[1] It should be noted that these averages are based on twelve months each year only since 1920. For 1918 and 1919, the numbers of months used were two and three, respectively.

CHART 2: INDEXES OF THE COST OF LIVING IN THE UNITED STATES, MONTHLY FROM JANUARY, 1926 TO DECEMBER, 1929

Base, July, 1914 = 100

(Source: National Industrial Conference Board)



Food

The most important element in household expenditures of wage earners is the outlay for food, and changes in its cost are therefore of vital concern to those who must make an effort to make both ends meet. An examination of the movement of food prices as a whole during the period 1914 to 1929 reveals the same four tendencies that were discernible in the general movement of prices. During the first period of rapidly rising prices, food rose above the general price level but not to the same extent as clothing. During the next period of falling prices, food went down sharply and since the end of 1920 has been consistently below the general price level.

Indexes back to 1913 are available for only twenty-two articles of food.[1] Tracing the course of the prices of the individual commodities, as shown in Table 7 for the period 1914 to 1929, a wide variety of movements is discovered. They afford an excellent illustration of the value of the index number method as a means of describing the net result of a number of forces in different directions and magnitude. In Chart 3 are shown the movements of each one of these twenty-two articles of food plotted against the average movement of food as a whole. Most of these commodities followed the general movement of food prices, i. e., during periods of rising prices their prices rose, and during periods of falling prices their prices declined. Some commodities followed the general movement quite closely, while others agreed with the trend but not with the amplitude of the movements. Again, some anticipated the general trend while others lagged slightly behind. Moreover, various commodities, particularly those subject to seasonal influences, fluctuated more or less about the general dominant trend.

The commodities which most closely kept in harmony with the general food price movement were round steak, milk, bread, rib roast, cheese, sirloin steak and butter. Hens too may be mentioned in this group, although since 1921 they have been consistently at a higher level. Lard went up far above the general food price level between 1916 and

[1] See p. 38 of this volume.

TABLE 7: INDEXES OF RETAIL PRICES OF TWENTY-TWO ARTICLES OF FOOD IN THE UNITED STATES, 1913 TO 1929

Base, Average of Year 1913 = 100

(Source: U. S. Bureau of Labor Statistics)

Year and Month	Sirloin Steak	Round Steak	Rib Roast	Chuck Roast	Plate Beef	Pork Chops	Bacon	Ham	Hens	Milk	Butter	Cheese	Lard	Eggs	Bread	Flour	Corn Meal	Rice	Potatoes	Sugar	Tea	Coffee	Weighted Food Index[1]
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1914	102.0	105.8	103.0	104.4	104.1	104.6	101.8	101.7	102.2	100.5	94.4	103.6	98.6	102.3	112.5	103.9	105.1	101.2	108.3	108.2	100.4	99.7	102.4
1915	101.1	103.0	101.4	100.6	100.0	96.4	99.8	97.2	97.5	99.2	93.4	105.0	93.4	98.7	125.0	125.8	108.4	104.3	88.9	120.1	100.2	100.6	101.3
1916	107.5	109.7	107.4	106.9	106.0	108.3	106.4	109.2	110 7	102.2	103.0	116.7	111 0	108.8	130.4	134.6	112.6	104.6	158.8	146.4	100.4	100.3	113.7
1917	124.0	129.8	125.5	130.6	129.8	151.7	151.9	142.2	134.5	125.4	127.2	150.4	174.9	139.4	164.3	211.2	192.2	119.0	252.7	169.3	106.9	101.4	146.4
1918	153.2	165.5	155.1	166.3	170.2	185.7	195.9	178.1	177.0	156 2	150.7	162.4	210.8	164.9	175.0	203.0	226.7	148.3	188.2	176.4	119.1	102.4	168.3
1919	164.2	174.4	164.1	168.8	166.9	201.4	205.2	198.5	193.0	174.2	177.0	192.8	233.5	182.0	178.6	218.2	213 3	173.6	223.5	205.5	128.9	145.3	185.9
1920	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	209.9	187.6	183.0	188.2	186.7	197.4	205.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4
1921	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	186.4	164.0	135.0	153.9	113.9	147.5	176.8	175.8	150.0	109.2	182.4	145.5	128.1	121.8	153.3
1922	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	169.0	147.2	125.1	148.9	107.6	128.7	155.4	154.5	130.0	109.2	164.7	132.7	125.2	121.1	141.6
1923	153.9	150.2	143.4	126.3	106.6	144.8	144.8	169.1	164.3	155.1	144.7	167.0	112.0	134.8	155.4	142.4	136.7	109.2	170.6	183.6	127 8	126.5	146.2
1924	155.9	151.6	145.5	130.0	109.1	146.7	139.6	168.4	165.7	155.1	135.0	159.7	120.3	138.6	157.1	148.5	156.7	116.1	158.8	167.3	131.4	145.3	145.9
1925	159.8	155.6	149.5	135.0	114.1	174.3	173.0	195.5	171.8	157.3	143.1	166.1	147.5	151.0	167.9	184.8	180.0	127.6	211.8	130.9	138.8	172.8	157.4
1926	162.6	159.6	153.0	140.6	120.7	188.1	186.3	213.4	182.2	157.3	138.6	165.6	138.6	140.6	167.9	181.8	170.0	133.3	288.2	125.5	141.0	171.1	160.6
1927	167.7	166.4	158.1	148.1	127.3	175.2	174.8	204.5	173.2	158.4	145.2	170.1	122.2	131.0	166.1	166.7	173.3	123.0	223.5	132.7	142.5	162.1	155.4
1928	188.2	188.3	176.8	174.4	157.0	165.7	163.0	196.7	175.6	159.6	147.5	174.2	117.7	134.5	162.5	163.6	176.7	114.9	158.8	129.1	142.3	165.1	154.3
1929	196.9	199.1	185.4	186.9	172.7	175.7	161.1	204.1	186.4	160.7	143.9	171.9	115.8	142.0	160.7	154.5	176.7	111.5	188.2	120.0	142.6	164.8	156.7
1928																							
January	174.8	173.1	165.2	158.8	142.1	149.0	165.2	192.2	172.8	160.7	150.9	177.4	119.6	162.0	164.3	160.6	173.3	117.2	176.5	129.1	142.3	162.8	155.1
February	176.4	174.4	167.2	160.6	144.6	140.5	161.9	190.3	174.6	160.7	147.0	177.4	115.8	124.9	164.3	160.6	173.3	117.2	176.5	129.1	142.1	163.1	151.6
March	176.8	175.3	167.2	161.3	146.3	136.2	159.3	187.7	174.6	159.6	149.6	174.2	112.7	107.2	162.5	160.6	173.3	116.1	200.0	129.1	142.3	163.8	151.4
April	178.3	177.6	168.7	163.1	147.9	149.0	158.9	188.1	177.0	158.4	143.9	172.9	112.7	103.8	162.5	163.6	176.7	114.9	205.9	129.1	141.9	164.1	152.1
May	181.5	181.2	172.2	166.3	150.4	168.6	159.6	190.3	177.0	158.4	142.6	172.4	114.6	108.7	162.5	169.7	176.7	114.9	194.1	130.9	141.9	164.4	153.8
June	186.6	186.5	175.3	172.5	152.9	165.7	160.0	192.2	174.2	157.3	140.7	172.4	115.2	112.5	164.3	172.7	176.7	113.8	170.6	132.7	142.1	165.1	152.6
July	195.7	196.9	181.8	180.6	157.9	177.6	162.6	198.5	172.3	158.4	141.8	173.3	116.5	120.6	164.3	169.7	176.7	114.9	135.3	132.7	142.3	165.1	152.8
August	200.8	202.2	184.8	185.0	162.0	190.0	165.9	204.5	172.8	158.4	144.7	173.8	118.4	130.4	164.3	163.6	176.7	113.8	129.4	129.1	142.3	165.8	154.2
September	203.9	205.4	188.9	190.0	170.2	211.0	168.1	208.2	177.9	159.6	150.4	175.1	122.2	146.1	162.5	160.6	176.7	114.9	129.4	127.3	142.3	166.1	157.8
October	198.0	200.0	185.9	188.8	171.9	179.0	167.8	206.7	177.9	159.6	150.1	175.6	123.4	157.4	162.5	157.6	176.7	113.8	129.4	125.5	142.5	166.4	156.8
November	193.3	194.6	183.3	185.6	171.9	170.0	164.8	203 0	178.4	160.7	152.2	174.2	120.9	171.9	162.5	154.5	176.7	112.6	129.4	123.6	142.3	166.8	157.3
December	189.8	191.5	180.3	181.9	168.6	149.0	160.4	198.5	177.9	160.7	154.8	174.2	118.4	169.3	160.7	154.5	176.7	113.8	129.4	121.8	142.1	166.8	155.8
1929																							
January	190.6	191.0	180.8	181.3	170.2	153.8	159.3	200.0	184.0	160.7	150.7	173.8	117.1	146.7	160.7	154.5	176.7	112.6	135.3	121.8	142.5	166.1	154.6
February	188.2	188.8	178.8	179.4	167.8	157.1	158.2	199.6	186.4	160.7	152.7	172.9	116.5	142.3	160.7	154.5	176.7	112.6	135.3	120.0	142.6	166.1	154.4
March	188.6	189.2	179.3	180.0	167.8	167.6	158.9	201.9	190.1	160.7	152.5	172.9	116.5	122.0	160.7	154.5	176.7	112.6	135.3	118.2	142.6	166.4	153.0
April	192.9	194.6	183.8	184.4	170.2	176.7	160.4	203.3	196.2	159.6	145.7	172.4	117.1	106.4	160.7	154.5	176.7	112.6	135.3	116.4	142.6	166.4	151.6
May	198.4	201.3	187.9	190.0	174.4	179.5	160.7	204.8	198.1	159.6	142.3	171.9	116.5	112.2	160.7	151.5	176.7	111.5	158.8	116.4	142.6	166.1	153.3
June	201.6	205.4	189.9	191.9	176.0	179.0	162.2	205.6	193.9	159.6	140.5	171.9	115.8	120.0	160.7	148.5	176.7	111.5	182.4	116.4	142.5	165.8	154.8
July	206.7	210.8	192.9	195.6	177.7	188.1	164.1	209.7	187.3	160.7	139.4	171.5	115.8	127.8	160.7	151.5	176.7	111.5	229.4	116.4	142.3	165.8	158.5
August	206.3	210.8	191.9	194.4	176.0	192.4	165.6	211.2	185.0	160.7	140.5	171.0	116.5	140.0	160.7	157.6	176.7	112.6	235.3	120.0	142.5	165.4	160.2
September	202.8	206.7	189.4	191.9	175.2	193.8	164.4	209.7	184.0	160.7	143.1	171.9	117.1	153.6	160.7	160.6	176.7	111.5	229.4	121.8	142.6	165.1	160.8
October	198.0	199.6	186.9	187.5	173.6	185.2	161.9	204.8	180.3	161.8	145.4	171.5	115.8	168.1	158.9	157.6	176.7	111.5	223.5	121.8	142.6	164.8	160.5
November	194.1	196.4	183.3	183.8	171.1	170.5	159.3	200.4	177.0	161.8	139.7	171.0	113.9	183.5	158.9	157.6	176.7	111.5	223.5	121.8	142.5	162.1	159.7
December	192.5	194.6	181.8	183.1	170.2	163.3	157.4	198.5	174.2	161.8	134.7	170.6	111.4	182.0	158.9	154.5	180.0	110.3	223.5	120.0	142.8	155.4	158.0

[1] Twenty-two articles for 1913–1920, forty-three articles for 1921–1929. See p. 38 of this volume.

Chart 3: Indexes of Monthly Retail Prices of Specified Articles of Food, 1913 to 1929

Base, 1913 = 100

(Source: U. S. Bureau of Labor Statistics)

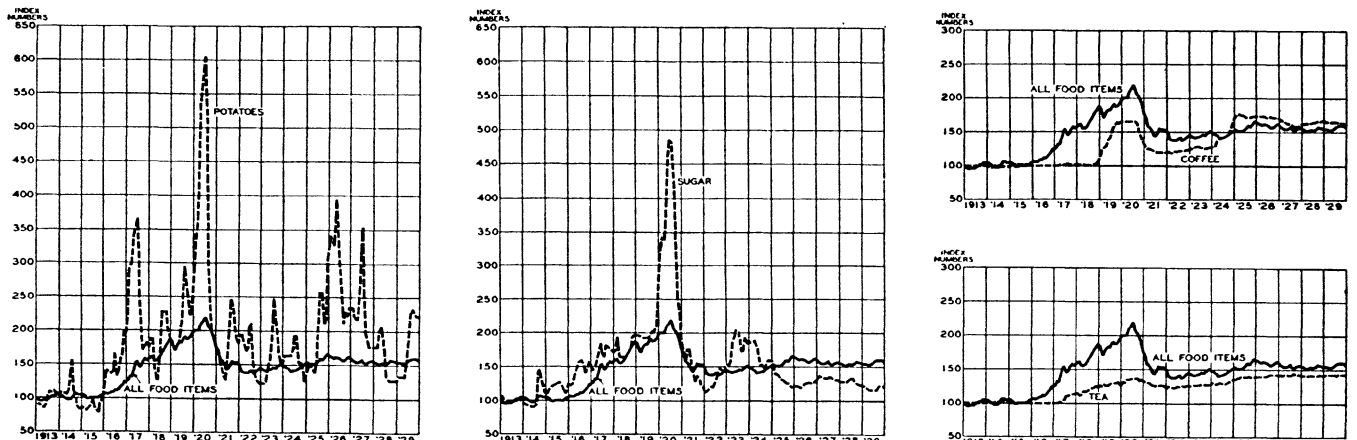


CHART 3: INDEXES OF MONTHLY RETAIL PRICES OF SPECIFIED ARTICLES OF FOOD, 1913 TO 1929 (*Continued*)

Base, 1913 = 100

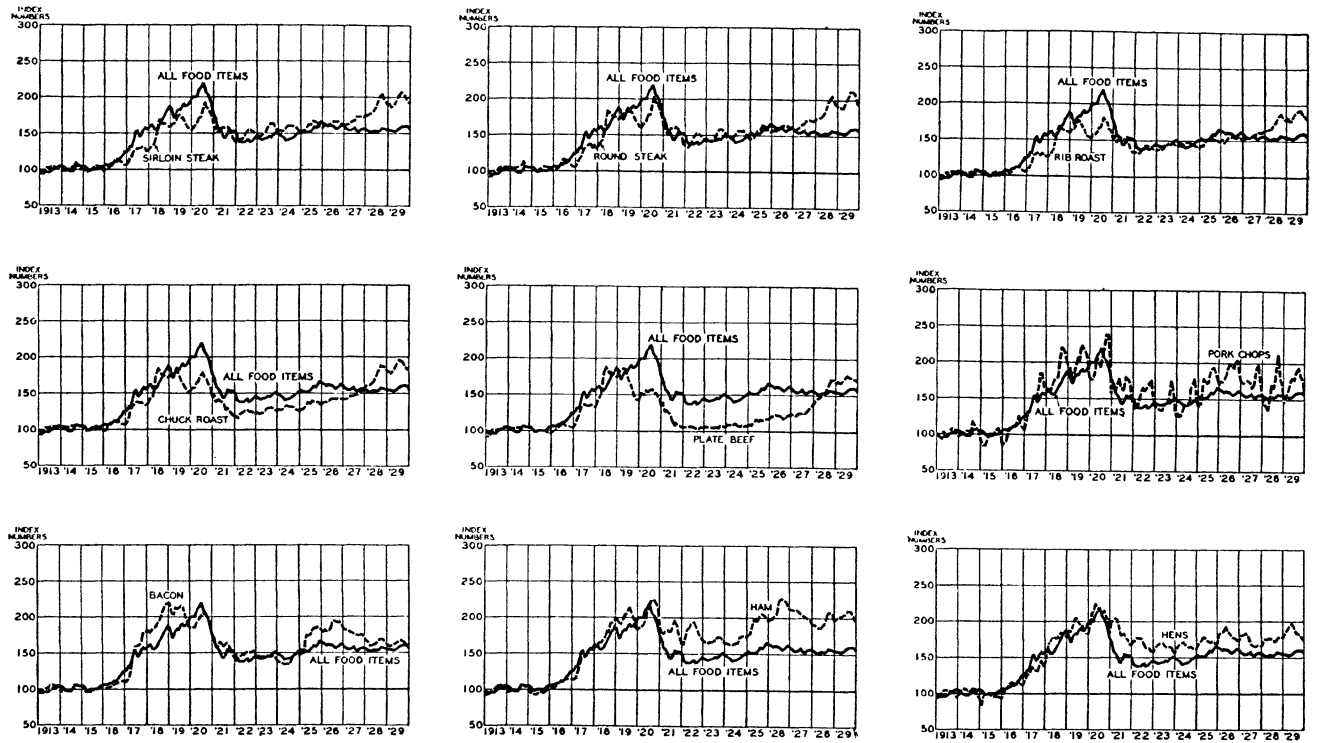
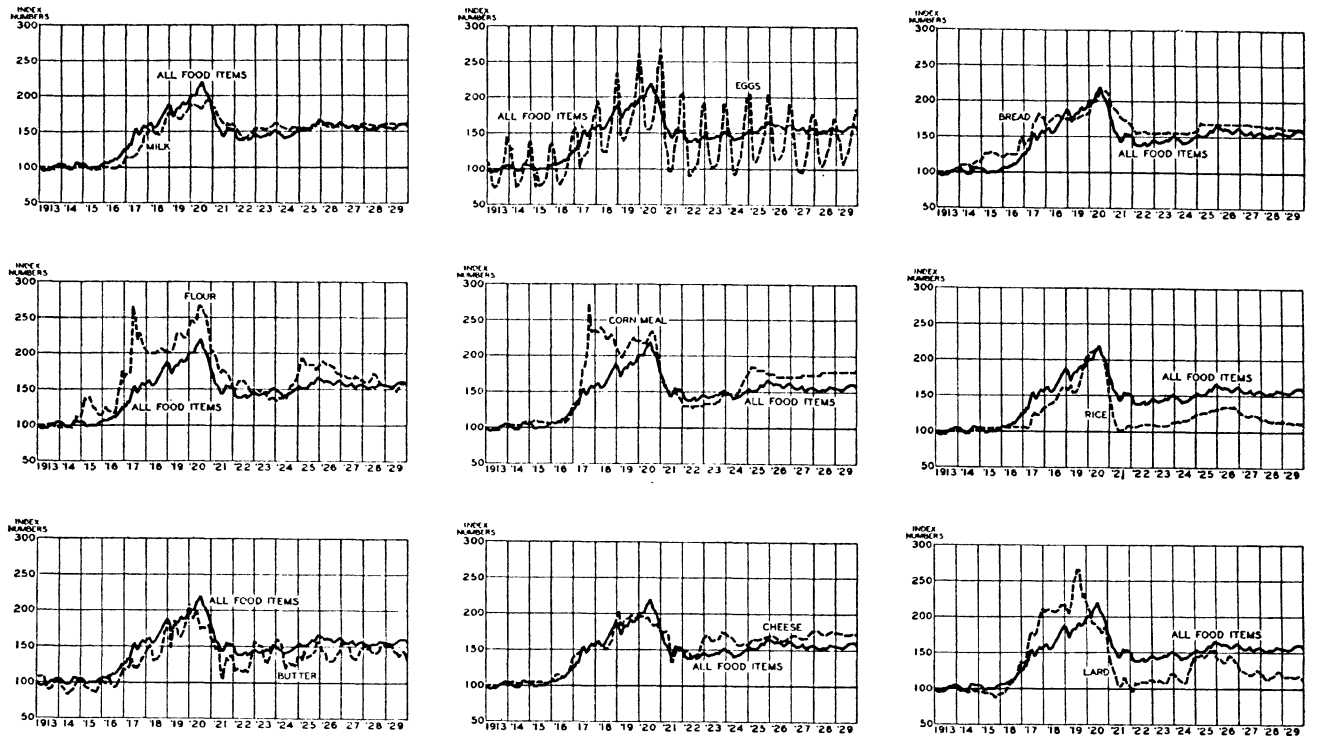


CHART 3: INDEXES OF MONTHLY RETAIL PRICES OF SPECIFIED ARTICLES OF FOOD, 1913 TO 1929 (*Concluded*)

Base, 1913 = 100



1920, but since the latter year has generally been below. Cheese and ham very closely followed the general food price movement until about 1921 but since then have been above the general level. Chuck roast and plate beef have been usually below the average food price level. The commodities which have been far above the general average at times, particularly during the early period of rising prices, are potatoes, corn meal and flour. Sugar, too, was found among the commodities exhibiting exceptional increase in price during 1920. Coffee, tea and rice, on the other hand, have generally been below the average level, although in recent years coffee has been higher than that level.

In order to determine how the prices of each one of these twenty-two commodities behaved during the entire period of 1914 to 1929, a simple average has been taken of the yearly index numbers of each item. They rank above or below the average for the group as a whole[1] as follows:

Above Average[1] (147.9)		Below Average[1] (147.9)	
Potatoes	190.5	Sirloin steak	147.6
Ham	167.5	Milk	144.7
Flour	165.6	Rib roast	142.5
Corn meal	160.3	Eggs	137.8
Hens	158.8	Chuck roast	137.5
Bread	156.5	Lard	135.6
Sugar	155.6	Butter	134.5
Pork chops	155.5	Coffee	132.8
Bacon	153.1	Plate beef	127.0
Cheese	152.7	Tea	124.1
Round steak	149.1	Rice	123.8

It is interesting to note how these commodities stood in 1929. Some of the commodities which ranked high above the average food price level on the basis of the average of their fluctuations in price during the fifteen-year period, occupied an entirely different position during the last year.

Above Average[1] (164.6)		Below Average[1] (164.6)	
Ham	204.1	Bacon	161.1
Round steak	199.1	Milk	160.7
Sirloin steak	196.9	Bread	160.7
Potatoes	188.2	Flour	154.5
Chuck roast	186.9	Butter	143.9
Hens	186.4	Tea	142.6
Rib roast	185.4	Eggs	142.0
Corn meal	176.7	Sugar	120.0
Pork chops	175.7	Lard	115.8
Plate beef	172.7	Rice	111.5
Cheese	171.9		
Coffee	164.8		

[1] This average is only of the twenty-two articles and not of the forty-three articles included in the Bureau's food budget.

It is evident that these various food commodities have not undergone uniform price changes since 1914. Some items have increased greatly in price, while others have risen to a much less degree. The effect of price changes on the consumer is not the same for each commodity. It may be possible for the prices of some commodities to increase considerably without appreciably affecting the consumer's expenditures, simply because the annual consumption is relatively small. On the other hand, even a fairly slight price increase in commodities which are used in large quantities may be seriously felt.

An indication of the relative importance of each one of the forty-three articles of food included in the index is afforded by the relative annual expenditures for each. The expenditures at average 1929 prices for the quantities which the Bureau of Labor Statistics estimated as fair annual allowances are given below expressed as percentages of the total outlay for food:

Meat and Fish	25.5	Dairy Products and Substitutes	34.9
Sirloin steak	3.9	Milk, fresh	11.9
Round steak	3.5	Milk, evaporated	2.1
Rib roast	2.8	Butter	8.9
Chuck roast	2.3	Cheese	1.1
Plate beef	1.2	Oleomargarine	1.1
Pork chops	3.3	Nut margarine	0.4
Bacon	1.8	Lard	1.5
Ham	3.0	Crisco	0.5
Lamb	0.8	Eggs	7.4
Hens	2.2		
Salmon, canned	0.7		
Cereals and Products	19.2	Vegetables	9.4
Bread	11.8	Beans, navy	0.8
Flour	3.3	Potatoes	5.5
Corn meal	0.7	Onions	1.1
Rolled oats	0.9	Cabbage	0.8
Corn flakes	0.3	Beans, baked	0.2
Cream of wheat	0.3	Corn, canned	0.3
Macaroni	1.1	Peas, canned	0.3
Rice	0.8	Tomatoes, canned	0.4
Fruits	2.3	Miscellaneous	8.7
Prunes	0.4	Sugar	2.4
Raisins	0.3	Tea	1.5
Bananas	0.9	Coffee	4.8
Oranges	0.7		

Seasonal Variations

The fluctuations from month to month have been greater in food than any other major group of household expendi-

tures. This is due to the highly seasonal character of the prices of some of the commodities which are included in the food group. An examination of Chart 3, which gives the movements of twenty-two articles of food in the period of 1914 to 1929, will clearly show the seasonal characteristics of some of the articles. Those which are particularly subject to seasonal influences are eggs, potatoes, pork chops, butter, round steak, sirloin steak, hens, rib roast, cheese and milk. Cabbages and oranges, not given in the chart because prices are not available back to 1913, also vary in price according to the season. Since more than half of the annual expenditures for the forty-three articles of food which the Bureau of Labor Statistics includes in its study is for the twelve articles mentioned, it follows that their price movements exert considerable influence on the total outlay for food. A counteracting factor, of course, is the fact that food consumption may vary from month to month, that is, the housewife may to a certain extent avoid buying those articles of food which are particularly high during certain months of the year and thus somewhat mitigate the strain on the purse. While the cost of living index does not take cognizance of this factor, it may be quite possible that actually the increase does not affect household expenditure to the degree indicated. Such an adjustment, however, is only possible with certain kinds of food, namely, those which may be temporarily dispensed with, and can not be made with any of the staple articles of food.

In Table 8 are presented monthly index numbers showing the seasonal variations of the twelve commodities which are especially subject to seasonal influences, both separately and combined, and in Chart 4 they are presented graphically, plotted against the seasonal index of the "all food items."

These fluctuations, it will be noted, are most marked in the prices of eggs. The peak of egg prices is in November and the low point in April. Between November and April egg prices fall; between April and November they rise. During the months from September through January and perhaps February they are above their yearly average, while during the remainder of the months they are below the yearly average. In other words, egg prices tend to be higher

TABLE 8: INDEXES OF SEASONAL VARIATIONS OF SPECIFIED ARTICLES OF FOOD AND OF FOOD AS A WHOLE[1]

(Source: U. S. Bureau of Labor Statistics. Computed by National Industrial Conference Board)

Month	Hens	Eggs, Fresh	Sirloin Steak	Round Steak	Pork Chops	Rib Roast	Butter
January	99.7	117.6	96.0	95.3	90.8	96.9	104.1
February	100.7	99.5	95.7	95.0	89.6	96.4	102.9
March	102.2	78.2	96.5	95.8	93.9	97.4	103.6
April	103.7	74.0	98.0	97.7	97.1	98.8	99.1
May	104.1	76.2	99.9	99.9	100.5	100.2	94.8
June	101.4	79.5	101.4	101.8	100.2	101.0	94.4
July	99.4	85.1	103.7	104.3	103.6	102.5	94.6
August	98.1	92.7	104.0	104.7	107.9	102.3	95.3
September	98.8	105.4	103.7	104.1	114.0	102.5	98.7
October	98.4	120.0	102.0	102.1	110.6	101.7	101.8
November	96.8	136.5	99.9	99.9	99.8	100.2	103.8
December	96.7	135.1	99.2	99.1	92.1	99.9	107.1

Month	Milk, Fresh	Potatoes	Cheese	Cabbage	Oranges	Weighted Average of Twelve Articles[2]	All Food Items
January	101.0	97.3	101.3	95.7	90.1	101.6	100.3
February	100.4	96.6	101.3	103.1	89.8	98.6	99.1
March	99.7	96.6	100.7	113.4	91.5	96.2	98.1
April	99.0	101.1	99.3	124.3	97.4	96.0	98.0
May	98.4	104.9	97.8	134.2	102.6	96.6	98.4
June	98.1	115.1	98.1	119.2	104.9	98.0	99.3
July	98.8	113.2	98.2	100.0	105.0	99.0	99.7
August	99.6	100.0	98.5	89.5	106.4	99.1	99.5
September	100.5	94.7	99.5	84.5	107.9	101.5	100.8
October	101.1	90.6	101.3	78.8	109.9	103.2	101.6
November	101.5	94.7	101.5	76.3	103.1	105.1	102.6
December	101.9	95.1	102.3	81.2	91.5	105.0	102.4

[1] Average index of each article for the period 1922–1929 equals 100.

[2] For method of weighting, see p. 81 of this volume.

in the fall and winter than they are in the spring and summer. Cabbages vary in price during the year almost as much as eggs. They are higher in price between February and July than during the remainder of the year. The rising trend is from November to May, and the downward trend from May to November. Potatoes also vary considerably in price from month to month although not nearly as much as eggs. The peak in the prices of potatoes is in June and the low point in October. Potato prices are higher in the spring and summer than they are in the fall and winter. Prices of pork chops fluctuate similarly in magnitude to those of potatoes, but

Chart 4: Indexes of Seasonal Variations in the Retail Prices of Specified Articles of Food

Base, Average of 1922–1929 = 100

(Source: U. S. Bureau of Labor Statistics. Computed by National Industrial Conference Board)

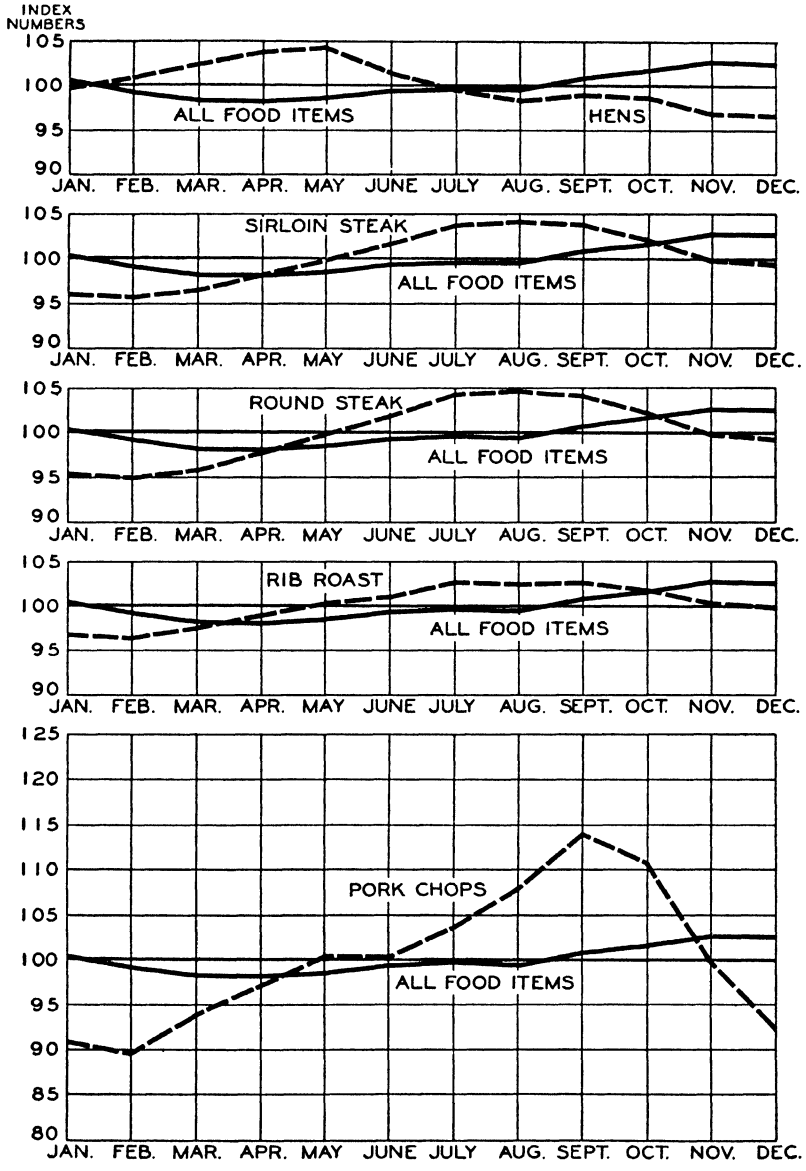


CHART 4: INDEXES OF SEASONAL VARIATIONS IN THE RETAIL PRICES OF SPECIFIED ARTICLES OF FOOD
(Continued)

Base, Average of 1922–1929 = 100

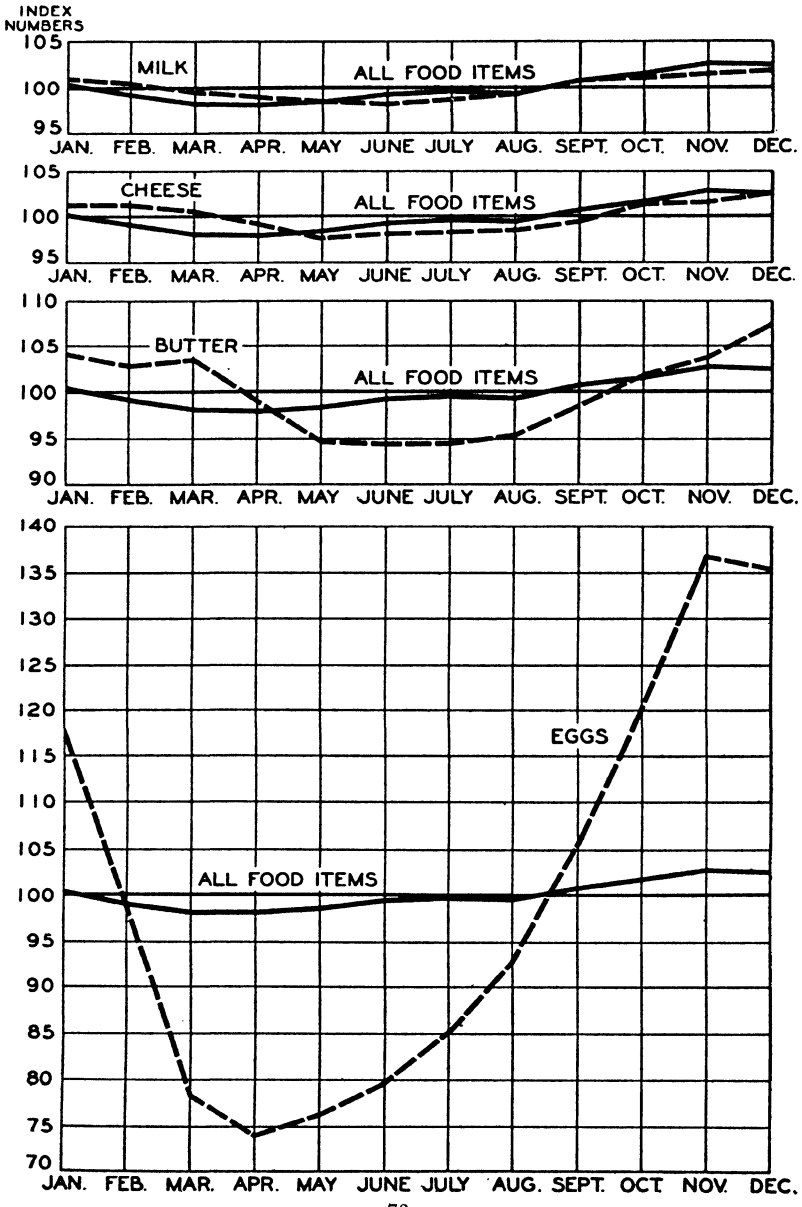
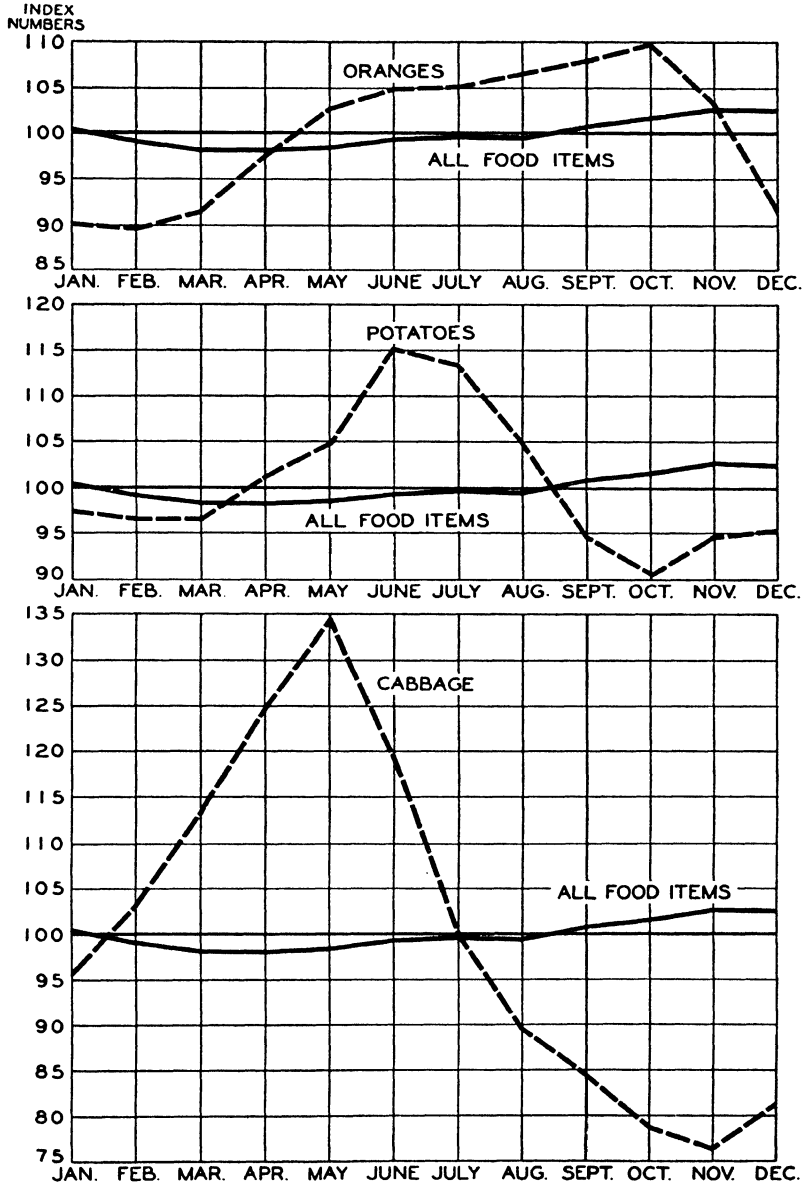


CHART 4: INDEXES OF SEASONAL VARIATIONS IN THE RETAIL PRICES OF SPECIFIED ARTICLES OF FOOD
(Concluded)

Base, Average of 1922–1929 = 100



the peak is in September and the low point in February. The prices of oranges also fluctuate fairly widely during the course of the year, and are generally higher in the months May through November than they are during the period December through April. The rise in price occurs between February and October. Butter prices are up in the months October through March and down between April and September. Round steak and sirloin steak are both lower in price in the winter than they are in the summer. They move practically together, although the prices of round steak increase and decrease to a slightly greater degree than those of sirloin steak. The prices of hens are higher in the first half of the year than in the second half of the year. Rib roast, on the other hand, is higher in the second half of the year than in the first half. Cheese and milk prices show only a slight degree of fluctuation, the higher prices occurring in the fall and winter months.

The extent to which the prices of each commodity fluctuate according to the seasons may be gauged by examining the range of the variations above and below their respective average prices for the year as a whole. Taking the average price of each commodity as 100, the maximum fluctuations above and below each respective average amounts to the number of points indicated here.[1]

Commodity	Above Average	Below Average	Total Change from Low to High Point
Eggs	36.5	26.0	62.5
Cabbages	34.2	23.7	57.9
Potatoes	15.1	9.4	24.5
Pork chops	14.0	10.4	24.4
Oranges	9.9	10.2	20.1
Butter	7.1	5.6	12.7
Round steak	4.7	5.0	9.7
Sirloin steak	4.0	4.3	8.3
Hens	4.1	3.3	7.4
Rib roast	2.5	3.6	6.1
Cheese	2.3	2.2	4.5
Milk	1.9	1.9	3.8

The figures and charts presented thus show that some commodities are higher in price in the winter than they are in the summer, while other commodities show the opposite

[1] Based on eight-year average, 1922–1929.

tendency. Again, some are higher in the first half of the year, while others are higher in the second half of the year. To determine the net result of these divergent movements, a weighted index has been constructed of these twelve commodities, which is designed to show the seasonal fluctuations of the group as a whole. The weights used are based on the relative expenditure for each one of these commodities at 1929 prices and for the average quantities estimated to be consumed annually in the United States by a wage earner's family.[1]

This index, which is presented in Table 8, shows that these twelve commodities combined result in a higher price level in the period September through January than between February and August. The lowest price level may be expected in April and the highest in November.

It is interesting to compare the general trend of these twelve commodities throughout the year with that of food as a whole. A seasonal index similar to that computed for each of the twelve commodities and all of them combined has been constructed for the entire food group. This index is also shown in Table 8. It clearly reveals the influence of these twelve commodities on the food index as a whole. The fluctuations in both are absolutely the same in time and direction, although the magnitude of the fluctuations in the food group as a whole is not as great as that of the twelve commodities because of the fact that the other commodities included do not vary greatly from their level from month to month. Any variations in the other commodities will undoubtedly be due to causes other than seasonal.

Housing

The course of the movement of rents during the years 1914–1929 was along somewhat different lines from that of the other major groups of household expenditures. Rents did not begin to rise appreciably until the latter part of 1916, and even then the upward movement did not approach in degree the rise of commodity prices. In 1919, the rise became more marked and continued steadily until

[1] See p. 36 for quantities consumed.

March, 1921. It was followed by a relatively small decline and another rise until the peak of rents was reached in July, 1924. Thus it is seen that the peak in rents occurred at a much later date than did the peaks for other major items entering into the cost of living. While in March, 1921, a temporary high point was marked in the course of rents, followed by a subsequent decline, the drop was not as sharp as it was when food, clothing, and other prices turned downward. Moreover, while all other major commodity groups rose after the low point in 1921 was reached, they never exceeded their previous high point again. After July, 1924, the trend of rents was downward until the middle of 1928. During the last year and a half rents have been practically stationary with an almost imperceptible downward trend. In December, 1929, the index of rents was 158.8 as compared with 160 in December of the preceding year.

Various forces caused rents to behave as they did. During the early war years there was no unusual demand for housing accommodations. War requirements such as influenced commodity prices did not at first directly affect the demand for dwellings. Later, however, building operations were greatly curtailed. This led first to an absorption of unoccupied dwellings, but these facilities were soon exhausted. The increased demand, therefore, coupled with greater construction costs of the new buildings that were undertaken and higher costs of repairs and upkeep, inevitably led to higher rentals. At times, and in some places, the housing shortage became so acute that rentals would probably have increased to much greater proportions than they did if they had not been regulated by rent laws. A counteracting influence to higher rents in the latter part of the period under review was the tremendous increase in building, which has been a very important factor in bringing down rent levels.

The situation here described refers, of course, only to general conditions in the country as a whole. Rents are perhaps more subject to local influences than any other major group of expenditures entering into the cost of living. Therefore, the general rent index can not be taken as absolutely representative of any particular locality. The changes that have occurred in rent levels in the cities represented in

the Board's survey are presented in Table 9. These changes are given as "ranges," i. e., a limit of ten points within which the changes noted in each city fall.

In view of the erroneous use sometimes made of these rent figures, a word of caution may be in order here. These figures represent merely *changes* in rents that have occurred *within* each city as compared with the rent level in that city in July, 1914. A comparison *between* cities can be made only with respect to the *changes* in the respective rent levels as related to July, 1914. For example, if the ranges of two cities are from 141 to 150 and from 121 to 130, respectively, it would be quite right to say that in city A rents increased from 41% to 50% over the pre-war date, while in city B they increased only from 21% to 30%. This is as far as any city to city comparison of rents can go. At no time can these figures be used to indicate the *actual* rent situation. Using the example given above, it could not be said that in city A rents are higher than in city B. While this might be true, the figures presented in the table do not warrant such a conclusion, for it might just as possibly be true that rents in city A, while having increased more over the July, 1914 level, are actually lower than those in city B. A simple illustration will prove this. Suppose that the average housing accommodations of wage earners in city A cost $20 per month in July, 1914 and $30 per month at some later date, an increase of 50%, while similar accommodations in city B cost $25 in July, 1914 and $32.50 on the later date, an increase of 30%. It is obvious that although the increase in city A was larger than that in city B, the actual rent level in city A on the later date was lower than that in city B.

Another consideration to keep in mind when studying these figures is that there has been a change in housing standards in some localities, and the figures for some cities may reflect this change in addition to the mere price change. On the other hand, little progress may have been made in other cities in improving wage earners' dwellings, and since in some instances the type of housing occupied by wage earners in 1914 may be somewhat below the standard now generally accepted, it would appear logical that the increase in the

TABLE 9: INDEXES OF RENTS OF WAGE EARNERS' DWELLINGS IN

Base, July,

(Source: National Industrial

City	Nov., 1918	July, 1919	July, 1920	July, 1921	July, 1922	July, 1923	July, 1924	July, 1925	July, 1926	July, 1927
Akron, Ohio	101-110	151-160	191-200	141-150	141-150	171-180	171-180	171-180	171-180	161-170
Albany, N. Y.	101-110	131-140	151-160	161-170	171-180	221-230	221-230	221-230	221-230	201-210
Allentown, Pa.	[1]	121-130	161-170	161-170	161-170	201-210	201-210	201-210	211-220	211-220
Alliance, Ohio	[1]	111-120	141-150	131-140	121-130	121-130	141-150	121-130	111-120	90-99
Altoona, Pa.	111-120	111-120	131-140	131-140	131-140	151-160	161-170	161-170	151-160	151-160
Ann Arbor, Mich.		121-130	161-170	201-210	201-210	[1]	[1]	281-290	231-240	321-330
Appleton, Wis.	[1]	141-150	211-220	231-240	[1]	241-250	201-210	[1]	171-180	151-160
Atlanta, Ga.	80-89	121-130	141-150	151-160	151-160	141-150	131-140	131-140	121-130	131-140
Atlantic City, N. J.	111-120	141-150	[1]	161-170	161-170	171-180	171-180	201-210	201-210	211-220
Augusta, Ga.	[1]	121-130	141-150	[1]	131-140	131-140	121-130	121-130	121-130	121-130
Baltimore, Md.	111-120	121-130	151-160	161-170	151-160	151-160	171-180	171-180	171-180	161-170
Battle Creek, Mich.	[1]	121-130	201-210	201-210	201-210	201-210	[1]	[1]	[1]	[1]
Bay City, Mich.	[1]	121-130	141-150	141-150	121-130	90-99	90-99	90-99	90-99	[1]
Bayonne, N. J.	131-140	151-160	201-210	211-220	211-220	211-220	211-220	211-220	191-200	181-190
Beaumont, Tex.	[1]	[1]	151-160	161-170	161-170	191-200	181-190	161-170	191-200	211-220
Bellingham, Wash.	[1]	121-130	161-170	141-150	111-120	131-140	191-200	191-200	171-180	121-130
Berkeley, Cal.	[1]	141-150	151-160	171-180	161-170	181-190	211-220	211-220	171-180	171-180
Bethlehem, Pa.	[1]	[1]	[1]	[1]	[1]	[1]	[1]	181-190	181-190	181-190
Billings, Mont.	101-110	101-110	131-140	141-150	101-110	80-89	50-59	70-79	60-69	90-99
Binghamton, N. Y.	121-130	141-150	221-230	221-230	231-240	221-230	251-260	201-210	171-180	171-180
Birmingham, Ala.	111-120	121-130	151-160[2]	151-160	121-130	121-130	131-140	131-140	131-140	121-130
Boston, Mass.	101-110	101-110	131-140	161-170	171-180	181-190	181-190	171-180	171-180	171-180
Bridgeport, Conn.	[1]	121-130	131-140	131-140	121-130	111-120	111-120	111-120	111-120	121-130
Brockton, Mass.	100	101-110	141-150	131-140	151-160	151-160	181-190	201-210	211-220	211-220
Buffalo, N. Y.	121-130	131-140	161-170	171-180	171-180	181-190	211-220	211-220	211-220	201-210
Butte, Mont.	[1]	[1]	[1]	[1]	70-79	[1]	50-59	50-59	60-69	60-69
Cambridge, Mass.	101-110	101-110	131-140	141-150	141-150	151-160	161-170	161-170	161-170	161-170
Camden, N. J.	[1]	131-140	141-150	141-150	141-150	171-180	201-210	231-240	231-240	231-240
Canton, Ohio	141-150	161-170	211-220	151-160	131-140	171-180	181-190	151-160	131-140	131-140
Champaign, Ill.	80-89	101-110	121-130	131-140	131-140	161-170	211-220	181-190	171-180	131-140
Charleston, S. C.	111-120	131-140	131-140	131-140	131-140	111-120	111-120	111-120	111-120	131-140
Chattanooga, Tenn.	121-130[2]	121-130	161-170	171-180	151-160	171-180	171-180	151-160	151-160	151-160
Chester, Pa.	171-180	171-180	201-210	211-220	151-160	231-240	231-240	231-240	211-220	211-220
Chicago, Ill.	101-110	121-130	151-160	171-180	171-180	201-210	211-220	201-210	191-200	181-190
Cincinnati, Ohio	101-110	111-120	131-140	141-150	141-150	171-180	181-190	201-210	211-220	201-210
Cleveland, Ohio	111-120	141-150	161-170	171-180	151-160	181-190	181-190	171-180	171-180	151-160
Clifton, N. J.	[1]	[1]	[1]	151-160	121-130	161-170	[1]	[1]	[1]	[1]
Clinton, Iowa	[1]	[1]	141-150	141-150	141-150	171-180	241-250	221-230	191-200	181-190
Columbia, S. C.	131-140	131-140	131-140	131-140	121-130	121-130	121-130	121-130	121-130	121-130
Columbus, Ohio	101-110	121-130	151-160	161-170	161-170	191-200	211-220	221-230	201-210	191-200
Concord, N. H.	101-110	101-110	131-140	151-160	151-160	151-160	151-160	151-160	151-160	[1]
Council Bluffs, Ia.	[1]	[1]	141-150	151-160	141-150	[1]	201-210	151-160	151-160	131-140
Covington, Ky.	[1]	[1]	121-130	141-150	161-170	181-190	201-210	201-210	201-210	191-200
Dallas, Tex.	111-120	111-120	141-150	151-160	151-160	151-160	151-160	151-160	151-160	121-130
Danville, Ill.	[1]	141-150	171-180	171-180	141-150	121-130	161-170	131-140	[1]	70-79
Davenport, Ia.	121-130	121-130	161-170	131-140	111-120	111-120	151-160	90-99	90-99	80-89
Dayton, Ohio	[1]	121-130	141-150	141-150	141-150	141-150	181-190	191-200	191-200	191-200
Denver, Col.	111-120	141-150	191-200	191-200	191-200	191-200	191-200	191-200	161-170	151-160
Des Moines, Ia.	111-120	131-140	161-170	191-200	191-200	191-200	171-180	141-150	121-130	111-120
Detroit, Mich.	131-140	131-140	181-190	161-170	151-160	211-220	211-220	201-210	211-220	191-200
Dubuque, Ia.	100	100	141-150	141-150	151-160	151-160	161-170	161-170	161-170	131-140
Duluth, Minn.	101-110	131-140	131-140	131-140	131-140	131-140	131-140	131-140	111-120	101-110
East St. Louis, Ill.	100	121-130	[1]	121-130	121-130	[1]	[1]	161-170	161-170	151-160
Elizabeth, N. J.	[1]	131-140	191-200	201-210	191-200	201-210	221-230	221-230	211-220	211-220
Elkhart, Ind.	121-130	121-130	151-160	151-160	131-140	141-150	141-150	161-170	161-170	151-160
Elmira, N. Y.	[1]	[1]	[1]	[1]	[1]	[1]	241-250	201-210	201-210	171-180
El Paso, Tex.	90-99	100	121-130	131-140	121-130	101-110	101-110	101-110	101-110	101-110
Elyria, Ohio	100	101-110	161-170	171-180	171-180	[1]	[1]	[1]	[1]	[1]
Erie, Pa.	131-140[2]	131-140	161-170	161-170	161-170	191-200	191-200	181-190	191-200	191-200
Evansville, Ind.	100	111-120	141-150	151-160	161-170	221-230	241-250	221-230	221-230	241-250
Everett, Wash.	101-110	111-120	121-130	121-130	111-120	151-160	151-160	151-160	131-140	131-140
Fall River, Mass.	[1]	111-120	121-130	131-140	131-140	141-150	141-150	141-150	141-150	131-140
Fayetteville, N. C.	[1]	[1]	[1]	151-160	[1]	[1]	[1]	[1]	[1]	[1]
Flint, Mich.	151-160	161-170	221-230	121-130	111-120	171-180	181-190	121-130	161-170	191-200
Fort Wayne, Ind.	121-130	121-130	161-170	151-160	151-160	151-160	151-160	131-140	111-120	101-110

[1] No report.

[2] Corrected figure, based on additional information received. See, National Industrial Conference Board, "The Cost of Living in the United States, 1914-1926," footnote 1, p. 42.

Specified Cities, November, 1918 to December, 1929

1914 = 100

Conference Board)

July, 1928	Jan., 1929	Feb., 1929	March, 1929	April, 1929	May, 1929	June, 1929	July, 1929	Aug., 1929	Sept., 1929	Oct., 1929	Nov., 1929	Dec., 1929
161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170
191–200	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
211–220	211–220	211–220	211–220	211–220	211–220	201–210	201–210	191–200	191–200	191–200	191–200	201–210
90–99	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
141–150	141–150	141–150	141–150	141–150	141–150	141–150	131–140	131–140	131–140	131–140	131–140	131–140
231–240	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
141–150	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130
211–220	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
121–130	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120
151–160	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150
[1]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
[1]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
181–190	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180
241–250	221–230	221–230	221–230	221–230	221–230	221–230	221–230	231–240	231–240	231–240	231–240	231–240
121–130	111–120	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130
161–170	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
181–190	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
101–110	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
181–190	181–190	181–190	181–190	181–190	191–200	191–200	191–200	191–200	191–200	191–200	191–200	191–200
111–120	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110
161–170	181–190	171–180	171–180	171–180	171–180	171–180	171–180	181–190	181–190	181–190	181–190	181–190
121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	131–140	131–140	131–140	131–140
211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220
201–210	201–210	201–210	201–210	201–210	201–210	201–210	201–210	191–200	191–200	191–200	191–200	191–200
60–69	60–69	60–69	60–69	60–69	60–69	60–69	60–69	60–69	60–69	60–69	60–69	60–69
121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130
[1]	171–180	171–180	171–180	171–180	161–170	161–170	161–170	151–160	151–160	161–170	161–170	161–170
101–110	101–110	101–110	101–110	101–110	101–110	101–110	111–120	111–120	111–120	111–120	111–120	111–120
131–140	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140
151–160	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150
211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220
171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180
191–200	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190
131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140
[1]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
161–170	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
111–120	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110
171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	161–170	161–170	151–160	151–160	151–160
171–180	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
101–110	101–110	111–120	111–120	111–120	111–120	111–120	121–130	121–130	121–130	121–130	121–130	121–130
181–190	181–190	181–190	181–190	181–190	181–190	181–190	171–180	171–180	171–180	171–180	171–180	171–180
121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130
70–79	50–59	50–59	50–59	50–59	40–49	40–49	40–49	40–49	40–49	40–49	40–49	40–49
80–89	80–89	80–89	80–89	80–89	80–89	80–89	80–89	80–89	90–99	90–99	90–99	90–99
181–190	171–180	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190
141–150	151–160	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	131–140
101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110
181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190
131–140	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150
101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110
141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	131–140	131–140	131–140	121–130
201–210	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
141–150	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
161–170	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
101–110	111–120	121–130	121–130	121–130	121–130	121–130	121–130	131–140	131–140	131–140	131–140	131–140
[1]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
191–200	201–210	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	221–230
211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220
131–140	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140
[1]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	181–190	171–180	171–180	171–180	151–160
101–110	111–120	111–120	111–120	111–120	121–130	121–130	121–130	121–130	131–140	141–150	141–150	141–150

[3] City no longer included in study.

TABLE 9: INDEXES OF RENTS OF WAGE EARNERS' DWELLINGS IN

Base, July,

Cities	Nov., 1918	July, 1919	July, 1920	July, 1921	July, 1922	July, 1923	July, 1924	July, 1925	July, 1926	July, 1927
Fort Worth, Tex.	[1]	141-150	171-180	151-160	121-130	121-130	111-120	111-120	101-110	101-110
Gary, Ind.	121-130	121-130	141-150	151-160	111-120	161-170	191-200	191-200	191-200	171-180
Geneva, N. Y.	101-110	101-110	121-130	121-130	121-130	221-230	221-230	221-230	221-230	181-190
Grand Rapids, Mich.	100	100	131-140	141-150	171-180	191-200	211-220	201-210	231-240	241-250
Great Falls, Mont.	100	100	100	100	80-90	90-99	111-120	111-120	121-130	151-160
Hamilton, Ohio	[1]	[1]	141-150	151-160	121-130	151-160	151-160	151-160	151-160	131-140
Harrisburg, Pa.	[1]	111-120	141-150	151-160	151-160	221-230	211-220	201-210	151-160	151-160
Hartford, Conn.	111-120	121-130	121-130	131-140	121-130	121-130	141-150	161-170	161-170	161-170
Haverhill, Mass.	[1]	[1]	[1]	[1]	[1]	[1]	171-180	141-150	121-130	101-110
Hoboken, N. J.	[1]	131-140	[1]	161-170	161-170	191-200	211-220	211-220	211-220	211-220
Holyoke, Mass.	[1]	111-120	141-150	161-170	161-170	211-220	241-250	241-250	201-210	191-200
Hoquiam, Wash.	111-120	[1]	151-160	141-150	151-160	191-200	191-200	191-200	251-260	231-240
Houston, Tex.	[1]	111-120	151-160	161-170	151-160	151-160	151-160	131-140	111-120	101-110
Huntington, W. Va.	[1]	[1]	[1]	[1]	[1]	[1]	141-150	131-140	121-130	121-130
Indianapolis, Ind.	100	101-110	121-130	131-140	141-150	141-150	161-170	141-150	131-140	121-130
Jackson, Mich.	[1]	111-120	171-180	171-180	131-140	181-190	181-190	181-190	211-220	211-220
Jacksonville, Fla	[1]	151-160	191-200	161-170	141-150	141-150	171-180	171-180	201-210	131-140
Jersey City, N. J.	111-120	121-130	151-160	161-170	171-180	201-210	231-240	221-230	211-220	201-210
Johnstown, Pa.	[1]	141-150	171-180	191-200	191-200	221-230	281-290	291-300	271-280	231-240
Kalamazoo, Mich.	[1]	[1]	141-150	131-140	131-140	161-170	191-200	191-200	[1]	[1]
Kansas City, Kan.	[1]	121-130	[1]	181-190	181-190	211-220	211-220	191-200	171-180	161-170
Kansas City, Mo.	100	121-130	151-160	141-150	141-150	141-150	141-150	151-160	131-140	191-200
Kenosha, Wis.	131-140	141-150	201-210	171-180	181-190	211-220[2]	211-220	261-270	261-270	211-220
Knoxville, Tenn.	111-120	121-130	151-160	171-180	171-180	191-200	191-200	151-160	131-140	131-140
Lafayette, Ind.	[1]	111-120	131-140	171-180	171-180	211-220	231-240	231-240	221-230	221-230
Lancaster, Pa.	[1]	121-130	131-140	131-140	121-130	151-160	201-210	211-220	171-180	151-160
Lansing, Mich.	111-120	[1]	[1]	131-140	161-170	[1]	171-180	151-160	101-110	101-110
Lawrence, Mass.	[1]	[1]	151-160	161-170	171-180	[1]	[1]	[1]	[1]	[1]
Lincoln, Neb.	101-110	131-140	161-170	171-180	151-160	151-160	151-160	131-140	111-120	111-120
Little Rock, Ark.	[1]	[1]	181-190	171-180	151-160	131-140	161-170	151-160	141-150	141-150
Los Angeles, Cal.	101-110	111-120	271-280	221-230	221-230	241-250	261-270	231-240	181-190	171-180
Louisville, Ky.	101-110	111-120	171-180	181-190	181-190	221-230	241-250	251-260	231-240	191-200
Lowell, Mass.	121-130	131-140	161-170	191-200	191-200	231-240	221-230	211-220	201-210	181-190
Lynn, Mass.	100	101-110	121-130	121-130	121-130	171-180	181-190	151-160	151-160	131-140
Macon, Ga.	[1]	[1]	[1]	[1]	[1]	[1]	151-160	151-160	161-170	161-170
Madison, Wis.	121-130	121-130	[1]	[1]	[1]	[1]	171-180	141-150	131-140	131-140
Malden, Mass.	[1]	101-110	131-140	151-160	151-160	161-170	161-170	171-180	171-180	171-180
Manchester, N. H.	[1]	101-110	131-140	131-140	131-140	131-140	141-150	141-150	121-130	121-130
Massillon, Ohio	121-130	131-140	161-170	161-170	161-170	[1]	201-210	191-200	211-220	201-210
Memphis, Tenn.	90-99	111-120	141-150	151-160	141-150	141-150	151-160	151-160	141-150	141-150
Miles City, Mont.	[1]	[1]	101-110	111-120	80-89	90-99	90-99	80-89	80-89	70-79
Milwaukee, Wis.	111-120	121-130	171-180	181-190	181-190	221-230	221-230	211-220	191-200	181-190
Minneapolis, Minn.	101-110	111-120	121-130	131-140	131-140	141-150	151-160	141-150	121-130	121-130
Mobile, Ala.	[1]	111-120	131-140	151-160	131-140	131-140	121-130	101-110	101-110	111-120
Nashville, Tenn.	100	100	131-140	151-160	151-160	151-160	151-160	141-150	101-110	90-99
Newark, N. J.	111-120	131-140	161-170	161-170	171-180	181-190	191-200	191-200	181-190	171-180
New Bedford, Mass.	111-120	121-130	151-160	161-170	161-170	161-170	161-170	161-170	161-170	151-160
New Britain, Conn.	111-120	121-130	161-170	161-170	151-160	161-170	161-170	181-190	131-140	111-120
New Haven, Conn.	111-120	111-120	151-160	161-170	161-170	161-170	191-200	191-200	171-180	171-180
New Orleans, La.	101-110	101-110	151-160	151-160	151-160	161-170	161-170	151-160	151-160	161-170
New York, N. Y.	111-120	121-130	171-180	171-180	181-190	181-190	191-200	191-200	181-190	171-180
Niagara Falls, N. Y.	[1]	121-130	131-140	[1]	[1]	[1]	161-170	161-170	131-140	121-130
Norfolk, Va.	111-120	121-130	161-170	171-180	171-180	151-160	141-150	141-150	121-130	121-130
Oakland, Cal.	111-120	131-140	141-150	151-160	141-150	141-150	171-180	171-180	161-170	151-160
Oklahoma City, Okla.	[1]	141-150[2]	201-210	191-200	181-190	171-180	141-150	141-150	171-180	191-200
Omaha, Neb.	100	131-140	171-180	161-170	161-170[2]	161-170[2]	161-170	121-130	121-130	101-110
Pasadena, Cal.	100	131-140	211-220	231-240	251-260	251-260	[1]	191-200	161-170	151-160
Passaic, N. J.	[1]	121-130	201-210	201-210	201-210	201-210	211-220	231-240	201-210	201-210
Paterson, N. J.	121-130	131-140	181-190	181-190	191-200	191-200	231-240	231-240	231-240	221-230
Pawtucket, R. I.	[1]	121-130	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]
Peoria, Ill.	[1]	111-120	131-140	131-140	141-150	161-170	161-170	141-150	121-130	111-120
Philadelphia, Pa.	111-120	111-120	151-160	151-160	151-160	181-190	201-210	211-220	211-220	201-210
Phoenix, Ariz.	100	101-110	151-160	171-180	151-160	161-170	211-220	191-200	191-200	191-200
Pittsburgh, Pa.	111-120	121-130	161-170	171-180	171-180	171-180	211-220	221-230	211-220	191-200
Port Huron, Mich.	131-140	131-140	171-180[2]	171-180	171-180	171-180	171-180	171-180	171-180	171-180

[1] No report.

[2] Corrected figure, based on additional information received. See, National Industrial Conference Board, "The Cost of Living in the United States, 1914–1926," footnote 1, p. 42.

Specified Cities, November, 1918 to December, 1929—(*Continued*)

1914 = 100

July, 1928	Jan., 1929	Feb., 1929	March, 1929	April, 1929	May, 1929	June, 1929	July, 1929	Aug., 1929	Sept., 1929	Oct., 1929	Nov., 1929	Dec., 1929
101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110
131–140	131–140	121–130	121–130	121–130	121–130	121–130	121–130	121–130	131–140	131–140	131–140	131–140
[1]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
221–230	261–270	261–270	251–260	261–270	261–270	261–270	261–270	271–280	271–280	261–270	261–270	281–290
151–160	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
[1]	171–180	181–190	191–200	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	201–210
141–150	141–150	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140
141–150	131–140	131–140	141–150	151–160	151–160	151–160	141–150	141–150	141–150	141–150	141–150	141–150
80–89	80–89	80–89	80–89	80–89	80–89	80–89	80–89	80–89	80–89	80–89	80–89	80–89
211–220	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	161–170	161–170	161–170	161–170
221–230	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
101–110	90–99	90–99	90–99	90–99	90–99	90–99	90–99	90–99	90–99	90–99	90–99	90–99
121–130	111–120	111–120	111–120	121–130	131–140	151–160	151–160	151–160	151–160	151–160	151–160	151–160
111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120
201–210	241–250	241–250	241–250	241–250	241–250	241–250	241–250	241–250	241–250	241–250	241–250	241–250
131–140	131–140	131–140	121–130	121–130	121–130	121–130	121–130	121–130	121–130	131–140	131–140	131–140
191–200	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220
[1]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]
171–180	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
191–200	191–200	191–200	191–200	191–200	191–200	191–200	191–200	191–200	191–200	191–200	191–200	191–200
231–240	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
121–130	121–130	121–130	121–130	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110
221–230	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
151–160	141–150	141–150	141–150	141–150	141–150	141–150	151–160	151–160	151–160	151–160	141–150	141–150
111–120	111–120	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130
[1]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]
111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	121–130	121–130	121–130
111–120	111–120	111–120	111–120	111–120	121–130	121–130	131–140	131–140	131–140	141–150	141–150	141–150
171–180	161–170	161–170	161–170	161–170	171–180	171–180	171–180	171–180	171–180	161–170	161–170	161–170
181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190
171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180
131–140	131–140	131–140	131–140	131–140	131–140	131–140	121–130	111–120	111–120	111–120	111–120	111–120
161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170
131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140
171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180
121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130
191–200	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
151–160	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	151–160	161–170
80–89	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
181–190	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180
121–130	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140
111–120	101–110	101–110	101–110	101–110	101–110	101–110	111–120	111–120	111–120	111–120	111–120	111–120
90–99	80–89	80–89	70–79	70–79	70–79	70–79	70–79	70–79	70–79	70–79	70–79	70–79
181–190	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180
121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	111–120	111–120	111–120	111–120	111–120
101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110
171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180
151–160	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	131–140	131–140	131–140
171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180
121–130	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	121–130	121–130
111–120	111–120	111–120	111–120	111–120	111–120	101–110	101–110	101–110	101–110	101–110	101–110	101–110
151–160	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
191–200	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	211–220	231–240	231–240
101–110	101–110	101–110	101–110	101–110	101–110	101–110	111–120	111–120	111–120	111–120	111–120	111–120
151–160	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
181–190	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
221–230	221–230	221–230	221–230	221–230	221–230	221–230	221–230	221–230	221–230	221–230	221–230	211–220
[1]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]
111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120
181–190	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180
211–220	221–230	221–230	221–230	211–220	201–210	201–210	201–210	201–210	201–210	201–210	211–220	211–220
171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180
191–200	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]

[3] City no longer included in study.

[4] See Table 10.

TABLE 9: INDEXES OF RENTS OF WAGE EARNERS' DWELLINGS IN

Base, July,

Cities	Nov., 1918	July, 1919	July, 1920	July, 1921	July, 1922	July, 1923	July, 1924	July, 1925	July, 1926	July, 1927
Portland, Me.	121-130	111-120	121-130	121-130	121-130	141-150	161-170	161-170	151-160	141-150
Portland, Ore.	151-160	171-180	171-180	191-200	191-200	191-200	191-200	171-180	161-170	141-150
Portsmouth, Va.	[1]	[1]	[1]	[1]	[1]	[1]	131-140	121-130	101-110	101-110
Providence, R. I.	101-110	111-120	121-130	121-130	131-140	141-150	161-170	161-170	161-170	161-170
Pueblo, Col.	[1]	151-160	151-160	171-180	171-180	151-160	151-160	151-160	151-160	161-170
Quincy, Ill.	[1]	[1]	[1]	[1]	[1]	[1]	201-210	201-210	[1]	[1]
Racine, Wis.	[1]	131-140	191-200	171-180	171-180	[1]	161-170	171-180	181-190	[1]
Reading, Pa.	101-110	131-140	171-180	161-170	151-160	171-180	181-190	201-210	221-230	171-180
Richmond, Ind.	100	121-130	221-230	221-230	181-190	191-200	251-260	201-210	201-210	201-210
Richmond, Va.	101-110	111-120	141-150	121-130	121-130	121-130	151-160	151-160	121-130	101-110
Riverside, Cal.	[1]	101-110	151-160	191-200	201-210	251-260	201-210	171-180	171-180	151-160
Roanoke, Va.	[1]	[1]	[1]	[1]	[1]	[1]	131-140	111-120	70-79	60-69
Rochester, N. Y.	111-120	111-120	141-150	181-190	181-190	191-200	191-200	191-200	181-190	191-200
Rockford, Ill.	121-130	121-130	141-150	141-150	141-150	121-130	151-160	171-180	171-180	171-180
Sacramento, Cal.	111-120	111-120	131-140	161-170	151-160	[1]	[1]	[1]	[1]	[1]
Saginaw, Mich.	121-130	161-170	171-180	131-140	131-140	131-140	131-140	141-150	141-150	141-150
St. Joseph, Mo.	[1]	141-150	181-190	181-190	201-210	231-240	191-200	141-150	131-140	121-130
St. Louis, Mo.	101-110	101-110	131-140	141-150	141-150	181-190	191-200	191-200	181-190	171-180
St. Paul, Minn.	[1]	100	131-140	[1]	131-140	111-120	171-180	151-160	111-120	111-120
Salt Lake City, Utah	100[2]	111-120	[1]	151-160	131-140	131-140	131-140	131-140	131-140	111-120
San Antonio, Tex.	111-120	121-130	151-160	181-190	181-190	171-180	161-170	151-160	151-160	141-150
San Diego, Cal.	100	100	141-150	171-180	171-180	201-210	201-210	201-210	201-210	191-200
San Francisco, Cal.	100	101-110	111-120	131-140	141-150	141-150	141-150	141-150	141-150	141-150
San Jose, Cal.	111-120	[1]	171-180	191-200	[1]	[1]	181-190	141-150	141-150	131-140
Savannah, Ga.	101-110	101-110	141-150	131-140	121-130	101-110	121-130	121-130	121-130	121-130
Schenectady, N. Y.	111-120	111-120	151-160	161-170	161-170	171-180	191-200	191-200	171-180	171-180
Scottsbluff, Neb.	[1]	[1]	121-130	[1]	[1]	[1]	[1]	[1]	[1]	[1]
Scranton, Pa.	101-110	121-130	141-150	151-160	181-190	[1]	271-280	141-150[2]	131-140	131-140
Seattle, Wash.	131-140	131-140	161-170	141-150	121-130	131-140	151-160	141-150	131-140	121-130
Sedalia, Mo.	[1]	[1]	[1]	[1]	[1]	[1]	111-120	101-110	121-130	101-110
Sioux City, Ia.	100	131-140	221-230	191-200	161-170	151-160	141-150	161-170	161-170	141-150
Sioux Falls, S. D.	[1]	[1]	[1]	[1]	[1]	[1]	141-150	141-150	111-120	101-110
Somerville, Mass.	[1]	111-120	131-140	181-190	191-200	211-220	221-230	231-240	221-230	211-220
South Bend, Ind.	121-130	131-140	181-190	181-190	181-190	221-230	221-230	251-260	211-220	191-200
Spokane, Wash.	111-120	131-140	181-190	181-190	181-190	181-190	181-190	171-180	171-180	171-180
Springfield, Ill.	101-110	111-120	151-160	171-180	171-180	211-220	221-230	221-230	171-180	151-160
Springfield, Mass.	121-130	121-130	141-150	151-160	151-160	151-160	151-160	151-160	141-150	141-150
Springfield, Ohio	101-110	101-110	121-130	121-130	121-130	121-130	121-130	111-120	101-110	101-110
Superior, Wis.	101-110	101-110	121-130	131-140	121-130	111-120	111-120	111-120	101-110	101-110
Syracuse, N. Y.	111-120	131-140	171-180	171-180	161-170	171-180	181-190	171-180	171-180	161-170
Tacoma, Wash.	131-140	131-140	141-150	131-140	121-130	121-130	121-130	121-130	121-130	121-130
Tampa, Fla.	100	101-110	[1]	161-170	141-150	131-140	171-180	191-200	231-240	221-230
Terre Haute, Ind.	121-130	121-130	151-160	211-220	211-220	221-230	221-230	171-180	141-150	141-150
Toledo, Ohio	111-120	131-140	151-160	151-160	141-150	131-140	141-150	141-150	131-140	131-140
Topeka, Kan.	[1]	[1]	[1]	[1]	[1]	[1]	171-180	141-150	131-140	131-140
Trenton, N. J.	111-120	121-130	171-180	181-190	181-190	181-190	191-200	171-180	161-170	151-160
Troy, N. Y.	[1]	[1]	131-140	151-160	161-170	161-170	191-200	191-200	191-200	161-170
Tulsa, Okla.	[1]	[1]	[1]	[1]	[1]	[1]	121-130	121-130	[1]	[1]
Utica, N. Y.	111-120	121-130	151-160	171-180	181-190	191-200	191-200	191-200	181-190	171-180
Warren, Ohio	111-120	[1]	141-150	[1]	[1]	[1]	201-210	201-210	181-190	171-180
Washington, D. C.	121-130	121-130	131-140	131-140	131-140	181-190	191-200	191-200	191-200	181-190
Waterbury, Conn.	[1]	151-160	161-170	151-160	151-160	151-160	161-170	171-180	151-160	131-140
Waterloo, Ia.	100	111-120	121-130	171-180	141-150	141-150	161-170	161-170	151-160	151-160
Waukesha, Wis.	121-130	121-130	[1]	[1]	161-170	151-160	151-160	141-150	141-150	161-170
Wichita, Kan.	[1]	121-130	191-200	191-200	171-180	151-160	90-99	101-110	90-99	90-99
Wilkes-Barre, Pa.	100	101-110	111-120	131-140	141-150	141-150	171-180	181-190	171-180	171-180
Wilmington, Del.	[1]	111-120	141-150	141-150	141-150	141-150	161-170	171-180	161-170	151-160
Worcester, Mass.	131-140	131-140	141-150	151-160	151-160	151-160	151-160	151-160	151-160	141-150
Yonkers, N. Y.	111-120	111-120	131-140	141-150	151-160	191-200	191-200	191-200	191-200	191-200
York, Pa.	[1]	[1]	151-160	151-160	151-160	131-140	131-140	131-140	131-140	131-140
Youngstown, Ohio	[1]	[1]	161-170	171-180	151-160	141-150	171-180	151-160	161-170	161-170

[1] No report.

[2] Corrected figure, based on additional information received. See, National Industrial Conference Board, "The Cost of Living in the United States, 1914-1926," footnote 1, p. 42.

Specified Cities, November, 1918 to December, 1929—(*Concluded*)

1914 = 100

July, 1928	Jan., 1929	Feb., 1929	March, 1929	April, 1929	May, 1929	June, 1929	July, 1929	Aug., 1929	Sept., 1929	Oct., 1929	Nov., 1929	Dec., 1929
141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	151–160	151–160	151–160
141–150	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140
101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110
151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160
151–160	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	151–160	151–160	151–160	151–160
[1]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]
181–190	171–180	171–180	171–180	171–180	181–190	181–190	181–190	191–200	191–200	191–200	181–190	171–180
171–180	181–190	181–190	181–190	181–190	191–200	191–200	191–200	191–200	191–200	191–200	191–200	191–200
171–180	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
101–110	101–110	101–110	101–110	101–110	101–110	101–110	111–120	111–120	111–120	111–120	111–120	111–120
161–170	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[4]	[3]	[3]	[3]	[3]
60–69	60–69	60–69	60–69	60–69	60–69	60–69	60–69	60–69	60–69	60–69	60–69	70–79
181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	171–180
161–170	161–170	161–170	161–170	161–170	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180
[1]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]
141–150	141–150	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160
131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140
171–180	171–180	171–180	171–180	171–180	171–180	161–170	161–170	161–170	161–170	161–170	161–170	161–170
111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120
111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	121–130	121–130	121–130
161–170	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	161–170	171–180
181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	181–190	161–170
131–140	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130
141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150	141–150
111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120
161–170	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180
[1]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
131–140	131–140	131–140	131–140	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130
131–140	141–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140
[1]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
141–150	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160
90–99	90–99	90–99	90–99	90–99	90–99	90–99	80–89	90–99	80–89	90–99	90–99	90–99
201–210	201–210	201–210	191–200	191–200	191–200	191–200	191–200	191–200	191–200	191–200	181–190	181–190
191–200	171–180	171–180	181–190	181–190	191–200	201–210	201–210	201–210	201–210	201–210	191–200	191–200
171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	181–190
171–180	151–160	151–160	151–160	141–150	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140
121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130
101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110
101–110	101–110	90–99	101–110	101–110	101–110	111–120	111–120	101–110	101–110	101–110	101–110	101–110
151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160	151–160
121–130	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120
181–190	171–180	171–180	171–180	171–180	171–180	171–180	151–160	151–160	151–160	151–160	161–170	161–170
111–120	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110
131–140	131–140	131–140	131–140	131–140	131–140	141–150	141–150	141–150	141–150	141–150	141–150	141–150
131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	121–130	121–130	111–120	111–120	111–120
141–150	141–150	141–150	141–150	141–150	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140
161–170	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	121–130	131–140	131–140	131–140	131–140
171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180
171–180	171–180	171–180	171–180	171–180	171–180	171–180	181–190	181–190	191–200	191–200	191–200	191–200
161–170	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180
121–130	121–130	121–130	121–130	121–130	121–130	121–130	111–120	121–130	121–130	121–130	121–130	111–120
181–190	201–210	201–210	201–210	201–210	211–220	221–230	221–230	221–230	221–230	221–230	211–220	211–220
161–170	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
90–99	101–110	101–110	101–110	101–110	111–120	111–120	111–120	121–130	121–130	121–130	121–130	121–130
171–180	171–180	171–180	171–180	171–180	171–180	171–180	171–180	161–170	161–170	161–170	161–170	161–170
151–160	151–160	151–160	151–160	151–160	151–160	151–160	171–180	171–180	171–180	171–180	171–180	171–180
131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140	131–140
[1]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
111–120	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110
171–180	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170	161–170

[1] City no longer included in study.

[4] See Table 10.

TABLE 10: INDEXES OF RENTS OF WAGE EARNERS' DWELLINGS IN SPECIFIED CITIES, 1929

Base, December, 1928 = 100

(Source: National Industrial Conference Board)

City	January	February	March	April	May	June	July	August	September	October	November	December
Charleston, W. Va.	100	100	100	100	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110
Columbus, Ga.	100	100	100	100	100	100	100	100	90–99	90–99	90–99	90–99
Fitchburg, Mass.	101–110	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	101–110
Fresno, Cal.	100	100	100	100	100	100	100	100	100	111–120	111–120	111–120
Jamestown, N. Y.	90–99	90–99	101–110	101–110	101–110	101–110	101–110	111–120	111–120	111–120	111–120	111–120
Kalamazoo, Mich.	100	100	100	100	100	100	100	100	100	100	100	100
Lawrence, Mass.	100	100	100	100	100	100	100	100	100	100	100	100
Lewiston, Me.	100	100	100	100	100	100	100	100	100	100	100	100
Lexington, Ky.	100	100	100	100	100	100	100	100	100	100	100	100
Meriden, Conn.	100	100	100	100	100	90–99	90–99	90–99	90–99	90–99	90–99	90–99
Montgomery, Ala.	100	100	100	100	100	100	100	100	100	100	100	100
Muncie, Ind.	100	100	100	100	111–120	111–120	111–120	111–120	111–120	111–120	100	100
Muskogee, Okla.	100	100	100	100	100	100	100	100	100	100	100	100
Pawtucket, R. I.	100	100	100	100	100	100	100	100	100	100	90–99	90–99
Perth Amboy, N. J.	100	100	100	100	100	100	100	100	100	90–99	90–99	90–99
Pittsfield, Mass.	100	100	100	100	100	100	100	100	100	100	100	100
Quincy, Ill.	100	100	100	100	100	100	100	100	100	100	100	100
Sacramento, Cal.	100	101–110	101–110	111–120	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110
Shreveport, La.	100	100	100	100	100	100	100	100	100	100	100	100
Stamford, Conn.	100	100	100	100	100	100	111–120	101–110	101–110	101–110	101–110	101–110
Taunton, Mass.	100	100	100	100	90–99	90–99	90–99	90–99	90–99	90–99	101–110	101–110
Watertown, N. Y.	90–99	90–99	90–99	100	100	100	100	100	100	100	100	100
Wheeling, W. Va.	100	100	100	100	100	90–99	90–99	90–99	90–99	90–99	90–99	90–99
Wichita Falls, Tex.	100	100	100	100	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110
Williamsport, Pa.	100	100	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110
Wilmington, N. C.	100	100	100	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120
Winston-Salem, N. C.	100	100	100	100	100	100	90–99	90–99	80–89	80–89	80–89	80–89
Woonsocket, R. I.	100	100	100	100	100	100	100	100	100	100	100	100

rents charged for such accommodations be slight, and perhaps even that rents be lower than in 1914.

Seasonal Variations

Practically no seasonal fluctuation is found in rents. If any tendency at all may be observed, it is toward a slight drop in October and December and a small increase in January and March. The difference from the average level for the year as a whole, however, is so insignificant that it may be almost disregarded. Seasonal indexes for housing are given in Table 21[1]; the accompanying chart is on page 141.

Clothing

Clothing prices were the first to go up when the general upward movement of prices began in the early war period They soared to heights not reached by any other major group of commodities, so that in 1920, at the peak of the price level, clothing prices were 177% above those of July, 1914. After this high point was attained, clothing prices dropped suddenly to the general price level, and during nine months of 1922 were even slightly below the general level. Since that period, however, the level of clothing prices in relation to 1914 has been consistently above the general price level. Men's clothing prices during practically this entire period have been on a slightly higher level than women's clothing prices, as may be noted in Table 11.

As pointed out before,[2] a modification of the clothing budget was made at the beginning of 1929. For a number of the new articles included in the present budget no 1914 prices were available. Hence it is possible to sketch the development of the individual articles since 1914 only in the case of those included in the former budget for the period 1914–1928.

In Table 12 are presented, for each of the articles of clothing included in the former budget, the index number at the peak in 1920, at the next low point, and the average for January and December, 1928. There is also given the percentage change from one point to the other. For con-

[1] See p. 140 of this volume.

[2] See pp. 40–42 of this volume.

TABLE 11: INDEXES OF THE RETAIL COST OF CLOTHING ON SPECIFIED DATES, JUNE, 1918 TO DECEMBER, 1929

Base, July, 1914 = 100

(Source: National Industrial Conference Board)

Date	Men's Clothing	Women's Clothing	All Clothing
1914			
July	100.0	100.0	100.0
1918			
June	173.3[1]	171.4[1]	177.0[1]
November	190.3[1]	188.1[1]	193.0[1]
1919			
March	180.8[1]	175.0[1]	181.0[1]
July	201.0	199.0	200.0
November	241.2	229.5	235.4
1920			
March	281.7	271.5	276.6
July	277.0[2]	256.2	266.4
November	235.6	219.3	227.5
1921			
March	178.3[2]	170.4	174.4
July	169.4	159.4	164.4
November	167.2[2]	155.0	161.1[2]
1922			
March	159.4	147.9	153.7
July	159.9	148.3	154.1
November	165.2	155.3	160.3
1923			
March	174.4	162.0	168.3
July	177.2	162.2	169.7
November	182.8	165.2	174.1
1924			
March	181.4	167.3	174.4
July	180.4	162.0	171.2
November	180.7	164.4	172.6
1925			
March	179.5	166.0	172.8
July	182.2	167.2	174.7
November	181.6	172.1	176.9
December	181.6	172.4	177.0
1926			
January	181	173	177
February	180	172	176
March	179	173	176
April	179	171	175
May	180	170	175
June	177	170	174
July	177	168	173
August	176	169	173
September	179	169	174
October	178	167	173
November	179	167	173
December	179	168	174

[1] Index numbers are based on figures in the more expensive of two sets of trial budgets; the total for all clothing is not an average of the two but is somewhat higher, in order to take into account the fact that less expensive clothing up to that time had increased more in cost than better grades. See, National Industrial Conference Board, "The Cost of Living in the United States, 1914–1926," pp. 34–35.

[2] Revised figure.

TABLE 11: INDEXES OF THE RETAIL COST OF CLOTHING, ON SPECIFIED DATES, JUNE, 1918 TO DECEMBER, 1929 (*Concluded*)

Base, July, 1914 = 100

Date	Men's Clothing	Women's Clothing	All Clothing
1927			
January	176	169	173
February	176	167	172
March	176	168	172
April	175	169	172
May	174	168	171
June	172	166	169
July	172	166	169
August	173	167	170
September	175	166	171
October	175	165	170
November	175	166	171
December	176	166	171
1928			
January	176	168	172
February	175	166	171
March	177	168	173
April	176	166	171
May	175	166	171
June	173	169	171
July	174	173	174
August	175	170	173
September	177	171	174
October	176	169	173
November	174	169	172
December	172	168	170
1929			
January	169.1	168.6	168.9
February	169.8	170.3	170.1
March	168.3	163.8	166.1
April	168.4	167.8	168.1
May	166.4	167.6	167.0
June	168.7	164.9	166.8
July	169.2	163.1	166.2
August	171.5	166.9	169.2
September	169.5	166.0	167.7
October	169.8	167.0	168.4
November	169.2	166.9	168.0
December	170.0	167.7	168.9

venience, these articles are arranged in order of magnitude of the index. A perusal of this table clearly reveals the extent to which clothing prices rose in the earlier period. At the peak of prices in 1920, the smallest increase noted was almost 140% while the largest was 460%. Cotton yard goods, with the possible exception of voile, rose especially high. The average[1] increase of cotton yard goods as a

[1] Unweighted.

TABLE 12: HIGHEST AND LOWEST INDEXES OF AVERAGE RETAIL PRICES OF SELECTED YARD GOODS AND ARTICLES OF CLOTHING, ON SPECIFIED DATES

Base, July, 1914 = 100

(Source: National Industrial Conference Board)

Highest Prices			Subsequent Lowest Prices				Prices in 1928		
Article	Index	Date	Article	Index	Date	Percentage Change from High to Low	Article	Index Average of Jan. and Dec., 1928	Percentage Change from Low to Average of Jan. and Dec., 1928
Percale	560.0	July, 1920	Percale	240.0	July, 1921	−51.1	Percale	288.5	20.2
Gingham	433.5	July, 1920			July, 1922		Women's vests	258.5	36.1
Overalls	364.3	July, 1920	Gingham	190.0	July, 1921	−56.2	Women's cape gloves	232.0	31.8
Long cloth	349.2	July, 1920			July, 1922		Men's coats	210.0	15.8
Men's workshirts	346.4	July, 1920	Women's vests	190.0	July, 1922	−42.4	Men's union suits	199.0	14.4
Men's coats	336.7	July, 1920	Overalls	182.7	March, 1922	−49.8	Women's velvet hats	198.5	31.2
Women's vests	330.0	March, 1920			July, 1922		Women's straw hats	197.0	19.4
Fruit of the Loom	321.1	July, 1920	Men's coats	181.3	March, 1922	−46.2	Overalls	196.0	7.3
Women's cape gloves	317.1	March, 1920	Women's cape gloves	176.0	July, 1922	−44.5	Women's coats	195.5	26.9
Men's union suits	311.6	March, 1920	Men's union suits	174.0	July, 1922	−44.2	Men's felt hats	191.5	29.8
Women's shoes	309.4	March, 1920	Women's shoes	172.7	March, 1922	−44.2	Gingham	189.5	−0.3
Women's coats	304.4	March, 1920	Men's workshirts	172.0	July, 1921	−50.3	Men's work shirts	177.5	3.2
Serge	296.6	March, 1920	Women's straw hats	165.0	Nov., 1922	−43.6	Women's shoes	173.0	0.2
Women's straw hats	292.6	Nov., 1920	Women's coats	154.1	March, 1922	−49.4	Longcloth	172.5	13.5
Women's velvet hats	289.3	March, 1920	Longcloth	152.0	July, 1921	−56.5	Men's dogskin gloves	167.0	11.6
Women's hosiery	279.2	July, 1920			July, 1922		Broadcloth	166.0	11.0
Men's suits	269.8	March, 1920	Women's velvet hats	151.3	July, 1922	−47.7	Women's hosiery	164.0	13.9
Men's shoes	269.3	March, 1920	Men's dogskin gloves	149.6	Nov., 1922	−43.0	Men's hosiery	163.5	16.8
Voile	266.4	March, 1920	Broadcloth	149.5	July, 1922	−43.2	Fruit of the Loom	161.0	15.0
Men's negligee shirts	265.5	July, 1920	Men's shoes	148.3	March, 1922	−44.9	Men's suits	160.5	10.1
Men's felt hats	263.8	July, 1920	Men's felt hats	147.5	July, 1922	−44.1	Women's blouses	160.0	22.1
Broadcloth	263.3	March, 1920	Men's suits	145.8	July, 1922	−46.0	Serge	159.0	9.7
Men's dogskin gloves	262.3	Nov., 1920	Serge	145.0	July, 1922	−51.1	Women's suits	151.0	8.7
Women's suits	256.2	March, 1920	Women's hosiery	144.0	July, 1921	−48.4	Men's shoes	149.5	0.8
Men's workshirts	248.6	July, 1920			March, 1922		Men's negligee shirts	145.5	11.1
Women's combinations	242.5	March, 1920	Fruit of the Loom	140.0	July, 1921	−56.4	Voile	139.0	5.3
Poplin	241.3	March, 1920	Men's hosiery	140.0	July, 1921	−41.7	Poplin	135.5	3.2
Men's hosiery	240.0	March, 1920			July, 1922		Men's work shirts	129.0	−0.8
Women's blouses	239.2	March, 1920	Women's suits	138.9	March, 1922	−45.8	Women's combinations	128.0	4.9
			Voile	132.0	July, 1922	−50.5			
			Poplin	131.3	March, 1922	−45.6			
					July, 1922				
			Men's negligee shirts	131.0	July, 1922	−50.7			
			Women's blouses	131.0	March, 1922	−45.2			
			Men's workshirts	130.0	March, 1922	−47.7			
			Women's combinations	122.0	March, 1922	−49.7			

group was 286% over July, 1914, and one of these items, percale, as noted before, rose 460% over the 1914 level. In other words, the coarser and cheaper materials rose relatively higher in price than the finer ones. Cotton yard goods increased to a much greater extent than most of the articles of clothing made of them.

Articles of clothing made of wool yard goods, on the other hand, showed the reverse situation. The average[1] price increase for the three kinds of goods, serge, poplin and broadcloth, was 167%, while coats made of such materials increased 221%. Suits, on the other hand, rose slightly less in price than wool yard goods, namely to 163% above the July, 1914 level. The smallest increase in 1920 was for muslin underwear, which rose 143% above July, 1914. After the period of deflation set in, the low point in clothing prices as a whole was reached in the early part of 1922. Some individual articles, however, had already reached their low point in the middle of 1921. When the drop had reached its lowest level in the period 1921–1922, the smallest increase noted, that of women's combinations, was still 22% above the July, 1914 level and the largest, percale, was 140% higher than 1914. Cotton yard goods, as a whole, were 71% above July, 1914 and no longer held the first place. They were exceeded by overalls, which were 83% higher in price, and knit underwear, which was 82% higher than in July, 1914. In 1928, as shown by the averages for January and December,[2] the relative level of the various groups of clothing was somewhat shifted, although percale still showed the highest increase, 189%, and women's combinations the lowest, 28%. Arranged in groups, prices of knit underwear were at a higher level relative to July, 1914 than any other group. They were 129% above 1914. Cotton yard goods, which had previously been very high, were 90% above the 1914 level and wool yard goods were 54% above.

Actual prices in 1929 are given in Table 13.

[1] Unweighted.

[2] An average of these two months is undoubtedly a fair indication of the price level, since January tends to be slightly below the average for the year and December slightly above it. See the chart on page 141.

Table 13: Average Retail Prices of Selected Articles of Clothing, 1929

(Source: National Industrial Conference Board)

Article	January	February	March	April	May	June	July	August	September	October	November	December
Men's Clothing												
Hosiery												
Cotton, solid color	$0.248	$0.249	$0.255	$0.243	$0.242	$0.250	$0.251	$0.252	$0.253	$0.251	$0.247	$0.253
Rayon and cotton mixture	0.406	0.405	0.400	0.403	0.398	0.398	0.407	0.400	0.403	0.409	0.402	0.399
Wool and cotton mixture	0.535	0.536	0.519	0.524	0.527	0.525	0.517	0.510	0.504	0.502	0.498	0.508
Underwear												
Union suit, knit, cotton	1.412	1.429	1.387	1.397	1.395	1.398	1.372	1.417	1.392	1.409	1.404	1.435
Nainsook, athletic type	0.838	0.814	0.822	0.830	0.819	0.830	0.831	0.835	0.839	0.839	0.824	0.842
Pajamas												
Cotton pongee	1.483	1.460	1.476	1.498	1.496	1.500	1.520	1.519	1.497	1.476	1.489	1.512
Flannelette	1.752	1.757	1.723	1.724	1.720	1.746	1.770	1.748	1.767	1.752	1.751	1.761
Nightshirts												
Cotton	1.474	1.471	1.469	1.463	1.456	1.464	1.499	1.495	1.489	1.508	1.508	1.520
Flannelette	1.487	1.470	1.455	1.478	1.453	1.453	1.470	1.467	1.451	1.464	1.447	1.463
Men's suits												
Serge	25.839	26.232	26.016	25.485	25.059	25.844	26.071	26.916	25.967	26.414	26.380	26.550
Cheviot	26.330	26.241	26.226	26.315	26.038	26.759	26.721	27.174	26.688	26.673	26.488	26.512
Coats												
Sweater	2.044	2.013	2.024	1.948	1.952	1.876	1.865	1.892	1.920	1.937	1.924	2.030
Overcoat	24.949	24.601	24.470	24.619	23.856	24.847	24.703	24.776	25.312	24.872	25.293	25.305
Shirts												
Work shirt, blue chambray	0.967	0.969	0.976	0.988	0.971	0.987	0.983	0.991	0.980	0.976	0.973	0.982
Shirt, printed percale	1.281	1.285	1.284	1.333	1.295	1.299	1.300	1.296	1.304	1.289	1.298	1.302
Overalls	1.623	1.618	1.624	1.634	1.637	1.621	1.641	1.655	1.671	1.644	1.632	1.654
Gloves												
Work, canton flannel	0.180	0.172	0.177	0.182	0.183	0.173	0.184	0.207	0.187	0.184	0.175	0.181
Leather, calf skin	1.997	2.042	2.058	2.085	1.983	2.071	2.062	2.166	2.100	1.960	2.033	1.999
Hats												
Felt	3.992	4.093	4.085	4.157	4.107	4.081	4.078	4.139	4.041	4.037	4.100	4.125
Straw	2.342	2.323	2.332	2.302	2.236	2.231	2.170	2.197	2.193	2.341	2.316	2.308
Caps, wool	1.458	1.467	1.454	1.459	1.420	1.431	1.451	1.450	1.472	1.456	1.449	1.474
Shoes												
Work	4.224	4.366	4.118	4.151	4.182	4.165	4.158	4.221	4.083	4.148	4.088	4.032
Oxford, calf skin	5.457	5.511	5.476	5.422	5.399	5.395	5.487	5.436	5.483	5.494	5.450	5.452

Women's Clothing												
Hosiery												
Mercerized cotton	$0.437	$0.424	$0.421	$0.433	$0.420	$0.414	$0.423	$0.438	$0.438	$0.445	$0.445	$0.443
Rayon	0.621	0.592	0.585	0.579	0.599	0.586	0.584	0.588	0.560	0.580	0.574	0.578
Silk	1.166	1.125	1.125	1.136	1.148	1.133	1.159	1.143	1.149	1.140	1.095	1.120
Mixture, wool, rayon and cotton	0.935	0.879	0.853	0.883	0.898	0.901	0.920	0.930	0.909	0.878	0.883	0.914
Underwear												
Union suit, cotton	0.726	0.721	0.719	0.706	0.697	0.718	0.697	0.688	0.712	0.690	0.706	0.722
Vests												
Cotton, knit	0.351	0.352	0.349	0.349	0.352	0.359	0.356	0.359	0.361	0.349	0.344	0.356
Rayon, knit	0.808	0.808	0.796	0.803	0.801	0.799	0.777	0.794	0.791	0.780	0.776	0.770
Bloomers												
Cotton, jersey knit	0.696	0.685	0.667	0.676	0.679	0.683	0.660	0.674	0.664	0.671	0.678	0.666
Rayon, knit	0.980	0.974	0.943	0.935	0.955	0.937	0.906	0.917	0.929	0.911	0.892	0.899
Corselette, cotton	1.784	1.821	1.769	1.794	1.787	1.771	1.789	1.848	1.859	1.886	1.795	1.833
Slips												
Sateen	1.130	1.137	1.164	1.168	1.152	1.128	1.151	1.152	1.126	1.121	1.141	1.146
Rayon, knit	1.587	1.576	1.520	1.487	1.530	1.510	1.492	1.492	1.494	1.528	1.510	1.467
Nightgowns												
Cotton, Windsor	1.071	1.040	1.038	1.048	1.048	1.045	1.041	1.056	1.045	1.049	1.049	1.044
Flannelette	1.306	1.327	1.281	1.328	1.307	1.308	1.301	1.307	1.324	1.297	1.289	1.293
Coats												
Light weight	17.990	18.261	17.245	17.501	18.007	17.301	15.802	16.223	16.858	17.162	16.584	17.017
Winter weight	23.887	25.179	23.883	24.757	24.338	24.912	23.015	24.306	23.840	24.854	25.266	25.652
Dresses												
Cotton house dress	1.512	1.580	1.489	1.553	1.489	1.479	1.469	1.529	1.515	1.516	1.527	1.523
Silk	11.199	11.086	10.640	11.033	10.865	10.538	10.371	10.607	10.533	10.558	10.970	10.678
Wool jersey	8.424	8.503	7.801	8.041	8.192	8.224	8.754	8.765	8.557	8.598	8.284	8.296
Gloves												
Women's chamois cloth	1.031	1.062	1.017	1.016	1.002	1.031	0.998	1.027	1.006	1.026	1.035	1.032
Hats												
Straw	3.464	3.361	3.293	3.534	3.635	3.457	3.291	3.520	3.401	3.473	3.620	3.945
Felt, wool	3.367	3.288	3.318	3.302	3.327	3.221	3.150	3.237	3.281	3.240	3.174	3.238
Shoes												
Oxford	5.441	5.684	5.479	5.586	5.540	5.343	5.424	5.519	5.499	5.493	5.378	5.418
Pump, patent	5.406	5.653	5.430	5.571	5.631	5.473	5.628	5.713	5.741	5.681	5.633	5.637

Seasonal Variations

Clothing prices vary somewhat according to the season but not to as marked a degree as food or fuel.[1] In January, February, March and April they tend to remain at about the same level, slightly below the yearly average. In May they usually rise above the average and drop again in June and July to a level slightly lower than the early months of the year. During September and the remaining months of the year, clothing prices generally rise above the yearly average.

Fuel and Light

Changes in the cost of fuel and light as a whole during the period 1914–1929 reveal two major tendencies, the first upward, the second downward. The rise in the cost of this major item was not as sharp as that of either food or clothing, except after March, 1920, nor did it go as high. Until July, 1920, the relative increase in the cost of fuel and light over the July, 1914 level was almost consistently below that of food, clothing and the total cost of living. The peak for fuel and light costs as a whole was attained slightly later than those of the other two major items mentioned, as well as that of the total cost of living. It occurred in November, 1920. Since then there has been a gradual downward trend accompanied by many fluctuations. While most of these fluctuations may be explained on seasonal grounds, since the prices of coal vary considerably during the year, not all of the changes may be attributed to this factor. In 1922 and 1923 the rise was probably more than might have been expected because of seasonal variations. Strikes have played some part, too, in the movement of coal prices. By comparing the level of increases in the cost of fuel and light as a whole since 1920 with the average price level shown by the total cost of living, it is found that during the period November, 1920 through the early part of 1925 the cost of fuel and light was consistently well above that of the total cost of living. Since 1925 it has been very close to that of the total cost of living, fluctuating more or less with it but on the whole

[1] See Table 21 and Chart 7.

staying slightly below, except in the summer of 1926 when it was considerably lower.

The fuel and light index is made up of the cost of coal, gas and electricity. Changes in the cost of each of these component elements, however, have followed different courses, as may be seen from Table 14. As pointed out before, until the end of 1922 the costs of gas and electricity were roughly estimated, and no separate figures were computed for coal, gas and electricity before 1925. It is impossible, therefore, to trace the development of each of these three elements since 1914. However, at the end of 1929 coal was about 80% above the July, 1914 level, gas only about 40% above, and electricity almost 20% below the 1914 level.

Coal

The course of coal prices as a whole shows three distinct trends: a sharp rise until the latter part of 1920, when coal prices were 128% above July, 1914; a subsequent sudden decline until March, 1922, to 84% above July, 1914; and since then rather wide fluctuations about the level reached in 1922. At the end of 1929 the index was practically the same as in March, 1922. The fluctuations during the last eight years, however, were rather extensive, the index ranging from 207 to 175.

The two types of coal, bituminous and anthracite, followed widely different courses. Table 15 shows that bituminous coal increased sharply, 147%, between 1914 and November, 1920; it declined until July, 1922 to 72% above July, 1914, and since then has varied widely, particularly during the period from July, 1922 to July, 1927. At the end of 1929 it was about 2% lower than in July, 1922. The fluctuations during more recent years are undoubtedly merely seasonal. Anthracite, on the other hand, while also rising sharply until the latter part of 1920, did not advance to the same extent during that earlier period as bituminous coal. In November, 1920, anthracite was 109% above its July, 1914 level. While a temporary decline was noted between 1920 and 1922, anthracite has since fluctuated more or less about the level reached in 1920. In December, 1929, it was

TABLE 14: INDEXES OF THE COST OF COAL, GAS AND ELECTRICITY FOR HOUSEHOLD USE, ON SPECIFIED DATES, JULY, 1914 TO DECEMBER, 1929

Base, July, 1914 = 100

(Source: National Industrial Conference Board)

Date	Coal	Gas and Electricity Combined[1]	Coal, Gas and Electricity Combined
1914			
July	100	100	100
1915			
July	[2]	[2]	102[2]
1916			
July	[2]	[2]	104[2]
1917			
July	[2]	[2]	126[2]
1918			
June	[3]	[3]	135[3]
November	[3]	[3]	140[3]
1919			
March	[3]	[3]	142[3]
July	[3]	[3]	142[3]
November	165	110	148
1920			
March	168	111	149
July	192	115	166
November	228	145	200
1921			
March	205	153	187
July	191	155	179
November	191	155	179
1922			
March	184	155	174
July	184	155	174
November	207	147	186
1923			
March	206	146	186
July	192	146	176
November	193	143	176
1924			
March	187	142	172
July	178	142	166
November	182	142	168
1925			
March	182	143	169
July	176	144	165
November	190[4]	122[1]	167[4]
December	188[4]	122	166[4]
1926			
January	189[4]	122	166[4]
February	195[4]	118	169[4]
March	190	118	166
April	184	118	162
May	179	118	158
June	179	118	158
July	179	118	158
August	180	121	160
September	182	121	161
October	185	121	163
November	195	121	170
December	194	121	169

See footnotes on opposite page.

TABLE 14: INDEXES OF THE COST OF COAL, GAS AND ELECTRICITY FOR HOUSEHOLD USE, ON SPECIFIED DATES, JULY, 1914 TO DECEMBER, 1929 (*Concluded*)

Base, July, 1914 = 100

Date	Coal	Gas and Electricity Combined	Coal, Gas and Electricity Combined
1927			
January	192	121	168
February	190	121	167
March	189	122	166
April	181	122	161
May	179	122	160
June	180	122	160
July	180	122	160
August	181	122	161
September	183	122	162
October	184	122	163
November	184	122	163
December	184	122	163
1928			
January	184	122	163
February	184	122	163
March	184	122	163
April	179	122	160
May	176	122	158
June	176	122	158
July	177	121	158
August	178	121	159
September	180	121	160
October	182	121	161
November	183	121	162
December	184	121	163
1929			
January	184.1	121	162.6
February	184.1	120	162.4
March	184.0	120	162.3
April	180.0	120	159.6
May	175.4	120	156.6
June	175.2	120	156.5
July	176.0	120	157.0
August	177.1	120	157.7
September	179.6	120	159.4
October	182.3	120	161.2
November	183.0	120	161.6
December	183.4	120	161.9

[1] Owing to the fact that changes in the cost of gas and electricity were only roughly estimated until November, 1922, largely on the basis of gas costs, and owing to the fact that the index for later dates was computed by linking the percentages of change within specified periods on to the original index, the index for gas and electricity combined tended to be higher until November, 1925 than would have been the case had the index been computed from the beginning with a weight of two for gas and one for electricity. In November, 1925, the combined gas and electricity index was computed by comparing costs directly with costs in July, 1914, and giving gas a weight of two and electricity a weight of one.

[2] Index numbers were not computed for coal, gas and electricity separately; the combined figure was interpolated on the basis of the best data then available. Research Report No. 17, *op. cit.*, p. 29; *ibid*, No. 25, p. 20.

[3] Although coal prices were collected and analyzed, beginning in June, 1918, index numbers were not computed for coal, gas and electricity separately. Research Report No. 9, *op. cit.*, pp. 65–70; *ibid.*, No. 14, pp. 19–23; *ibid.*, No. 17, pp. 20–23; *ibid.*, No. 19, pp. 20–22; *ibid.*, No. 25, p. 20.

[4] Owing to the anthracite strike, the coal index includes estimates based on prices of anthracite substitutes.

TABLE 15: INDEXES OF RETAIL COAL PRICES, ON SPECIFIED DATES, MARCH, 1919 TO DECEMBER, 1929

Base, July, 1914 = 100

(Source: National Industrial Conference Board)

Date	Bituminous	Anthracite			Total Coal
		Stove	Chestnut	Combined	
1914					
July	100.0	100.0	100.0	100.0	100
1919					
March	156.9	154.5	152.8	..	..
July	155.5	156.6	154.8	..	..
November	166.6	163.2	160.5	161.9	165
1920					
March	170.0	166.7	163.7	165.2	168
July	203.1	185.5	181.4	183.5	192
November	246.6	211.2	207.1	209.2	228
1921					
March	207.3	205.7	202.2	204.0	205
July	187.4	195.8	193.3	194.6	191
November	185.2	197.4	194.5	196.0	191
1922					
March	174.7	195.5	192.5	194.0	184
July	171.7	195.4	193.8	194.6	184
November	209.8	205.0	201.5	203.3	207
1923					
March	204.8	208.0	204.2	206.1	206
July	183.7	202.4	198.7	200.6	192
November	182.4	212.4	208.1	210.3	193
1924					
March	174.1	210.4	204.7	207.6	187
July	162.2	203.3	198.4	200.9	178
November	167.2	207.3	201.4	204.4	182
1925					
March	166.9	207.7	202.1	204.9	182
July	159.7	205.8	197.4	201.6	176
November	177.7	..	..	..	190[1]
December	179.7	..	..	..	188[1]
1926					
January	181.7	..	..	..	189[1]
February	184.6	..	..	..	195[1]
March	178.5	218.5	209.6	214.1	190
April	171.0	213.7	204.8	209.3	184
May	164.7	211.1	201.9	206.5	179
June	164.2	211.1	201.9	206.5	179
July	163.9	211.3	201.9	206.6	179
August	165.2	212.1	202.3	207.2	180
September	168.7	213.2	203.3	208.3	182
October	172.9	213.8	204.1	209.0	185
November	190.7	215.1	205.5	210.3	195
December	188.6	215.3	205.7	210.5	194
1927					
January	184.3	215.3	205.7	210.5	192
February	181.7	215.1	205.5	210.3	190
March	180.1	214.7	205.1	209.9	189
April	171.6	207.4	196.7	202.1	181

[1] Owing to the strike in the anthracite coal field, no data were collected for anthracite; this figure includes an estimate of changes in the cost of fuel based on prices of substitutes.

TABLE 15: INDEXES OF RETAIL COAL PRICES, ON SPECIFIED DATES, MARCH, 1919 TO DECEMBER, 1929 (*Continued*)

Base, July, 1914=100

Date	Bituminous	Anthracite			Total Coal
		Stove	Chestnut	Combined	
May	169.9	206.0	195.3	200.7	179
June	169.4	207.6	196.9	202.3	180
July	169.1	208.4	197.7	203.1	180
August	169.8	208.6	198.1	203.4	181
September	172.2	211.1	200.5	205.8	183
October	173.6	211.9	201.3	206.6	184
November	173.4	212.1	201.5	206.8	184
December	173.4	212.5	201.9	207.2	184
1928					
January	172.7	212.5	201.9	207.2	184
February	172.2	212.5	201.9	207.2	184
March	171.9	212.5	201.9	207.2	184
April	167.6	206.1	196.2	201.2	179
May	164.1	203.0	193.5	198.3	176
June	163.0	203.8	194.5	199.2	176
July	162.8	204.2	194.9	199.6	177
August	163.1	204.6	195.9	200.3	178
September	164.6	207.9	199.2	203.6	180
October	166.6	209.1	200.4	204.8	182
November	167.8	210.8	201.6	206.2	183
December	168.3	211.6	202.2	206.9	184
1929					
January	168.3	211.7	202.3	207.0	184
February	168.1	211.8	202.4	207.1	184
March	167.9	211.7	202.3	207.0	184
April	164.4	207.0	197.7	202.4	180
May	159.7	202.8	193.3	198.1	175
June	158.7	203.4	193.9	198.7	175
July	159.2	204.7	195.4	200.1	176
August	160.4	205.6	196.2	200.9	177
September	163.3	207.8	198.2	203.0	180
October	166.4	210.0	200.4	205.2	182
November	167.3	210.5	202.7	206.6	183
December	167.9	210.7	203.0	206.9	183

107% above July, 1914. Of the two kinds of anthracite, the stove variety has been on a slightly higher level than chestnut. In December, 1929, stove and chestnut anthracite were 111% and 103%, respectively, over their 1914 levels.

Coal is one of the most standardized commodities in the cost of living study and because of this fact it is undoubtedly much easier to secure more comparable quotations from all parts of the country than is possible, for example, in the case of rents or clothing. Therefore, a comparison of changes in coal prices by cities is probably less beset with danger than a similar comparison of other commodities.

TABLE 16: INDEXES OF RETAIL COAL PRICES FOR HOUSEHOLD 1919 TO DECEMBER,

Base, July,

(Source: National Indus

Locality	March, 1919			July, 1919			November, 1919		
	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal
	Stove	Chestnut		Stove	Chestnut		Stove	Chestnut	
UNITED STATES	154.5	152.8	156.9	156.6	154.8	155.5	163.2	160.5	166.6
Eastern District	159.7	156.5	193.5	162.7	159.1	179.1	170.5	166.7	183.3
Albany, N. Y.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Baltimore, Md.	164.1	165.5	[2]	162.2	160.8	181.2	168.9	167.4	181.2
Boston, Mass.	148.3	143.5	193.5	161.3	156.1	191.5	171.5	166.0	202.0
Bridgeport, Conn.	203.3	199.2	212.5	189.8	186.0	200.6	198.6	193.5	200.5
Buffalo, N. Y.	155.2	151.1	248.9	160.5	157.3	219.0	163.3	160.0	257.1
Cambridge, Mass.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Fall River, Mass.	158.8	158.8	205.0	159.6	155.2	190.0	165.8	161.5	190.0
Lawrence, Mass.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Lowell, Mass.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Lynn, Mass.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Manchester, N. H.	150.5	149.0	187.3	154.5	153.0	157.7	157.7	156.0	157.7
Newark, N. J.	156.0	150.0	[2]	160.8	154.6	[2]	164.0	157.9	[2]
New Britain, Conn.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
New Haven, Conn.	178.5	178.5	[2]	166.7	166.7	[2]	177.8	177.8	[2]
New York, N. Y.	152.1	148.1	167.6	159.3	155.5	167.6	161.4	157.2	167.5
Paterson, N. J.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Philadelphia, Pa.	153 9	149.9	[2]	158.0	153.9	136.4	172.5	166.5	144.5
Pittsburgh, Pa.	[2]	160.1	[2]	[2]	160.1	[2]	[2]	172.8	[2]
Portland, Me.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Providence, R. I.	169.5	165.3	212.3	169.4	164.9	192.3	176.2	171.5	202.0
Reading, Pa.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Rochester, N. Y.	146.3	143.8	195.2	155.9	152.3	182.3	158.8	155.5	182.3
Schenectady, N. Y.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Scranton, Pa.	159.6	154.3	140.9	181.2	173.3	[2]	180.7	174.0	140.8
Springfield, Mass.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Syracuse, N. Y.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Trenton, N. J.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Washington, D. C.	155.7	153.3	[2]	158.4	156.6	159.8	163.0	160.6	159.6
Wilmington, Del.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Middle Western District	152.1	149.5	161.8	153.3	151.1	156.1	158.7	157.6	172.8
Chicago, Ill.	150.6	147.2	130.0	154.4	150.9	130.0	157.0	153.4	140.0
Cincinnati, Ohio	151.6	146.9	157.6	154.8	151.6	171.3	161.3	158.0	194.5
Cleveland, Ohio	143.2	144.1	143.1	149.3	152.3	147.6	161.0	159.2	171.4
Columbus, Ohio	148.4	148.4	162.1	143.8	148.4	162.1	150.0	155.0	179.5
Dayton, Ohio	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Detroit, Mich.	152.1	151.0	152.6	156.1	154.2	156.4	165.6	163.0	177.4
Duluth, Minn.	141.6	138.4	154.9	152.5	149.1	148.6	156.3	152.8	156.2
Grand Rapids, Mich.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Indianapolis, Ind.	151.7	151.3	148.6	155.3	151.5	153.9	162.5	168.8	177.8
Kansas City, Kan.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Kansas City, Mo.	[2]	[2]	172.6	146.7	146.7	168.6	153.1	153.1	[2]
Louisville, Ky.	144.9	144.9	176.9	147.8	147.8	165.5	155.0	155.0	178.5
Milwaukee, Wis.	154.6	152.4	141.4	157.2	154.9	144.0	160.0	157.5	164.0
Minneapolis, Minn.	156.4	153.2	163.9	153.3	150.3	155.6	155.6	152.4	175.6
Omaha, Neb.	[2]	[2]	167.9	153.0	150.5	[2]	157.2	154.5	[2]
St. Louis, Mo.	161.5	156.5	179.9	160.2	155.4	179.2	162.6	157.8	197.3
St. Paul, Minn.	153.9	147.4	163.9	150.8	147.9	153.0	153.0	150.0	150.8
Far Western District	139.8	146.5	136.4	132.3	141.9	134.1	145.1	141.5	143.9
Butte, Mont.	[2]	[2]	129.4	[2]	[2]	133.7	[2]	[2]	140.5
Denver, Col.	140.6	138.8	147.5	140.6	141.9	154.6	150.0	147.2	168.6
Los Angeles, Cal.	123.5	[2]	128.3	123.5	[2]	111.5	129.4	[2]	133.3
Portland, Ore.	[2]	[2]	123.7	[2]	[2]	121.1	[2]	[2]	146.1
Salt Lake City, Utah	152.4	152.4	138.5	[2]	[2]	130.4	153.4	150.0	143.5
San Francisco, Cal.	[2]	[2]	[2]	[2]	[2]	112.5	[2]	124.3	120.8
Seattle, Wash.	[2]	[2]	163.5	[2]	[2]	163.5	[2]	[2]	163.5
Southern District	155.2	154.0	152.4	154.3	153.0	157.0	165.1	161.3	180.1
Atlanta, Ga.	[2]	[2]	155.0	153.0	156.8	170.0	[2]	159.4	190.0
Birmingham, Ala.	[2]	[2]	191.6	[2]	[2]	175.0	[2]	[2]	208.8
Charleston, S. C.	169.7	169.7	125.9	164.0	163.6	125.9	164.0	163.6	[2]
Dallas, Tex.	[2]	[2]	[2]	[2]	[2]	157.1	[2]	[2]	200.0
Jacksonville, Fla.	150.0	150.0	133.3	[2]	[2]	[2]	[2]	[2]	[2]
Little Rock, Ark.	146.6	140.0	166.4	150.6	140.0	166.7	162.9	152.5	211.5
Macon, Ga.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Memphis, Tenn.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
New Orleans, La.	160.0	156.1	133.3	[2]	[2]	133.3	170.0	170.0	126.2
Richmond, Va.	153.3	153.3	176.5	[2]	[2]	[2]	[2]	[2]	[2]

[1] Corrected figure.

[2] No report.

USE, IN SPECIFIED CITIES, ON SPECIFIED DATES, MARCH, 1929

1914=100

trial Conference Board)

March, 1920			July, 1920			November, 1920			March, 1921		
Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal
Stove	Chestnut		Stove	Chestnut		Stove	Chestnut		Stove	Chestnut	
166.7	163.7	170.0	185.5	181.4	203.1	211.2	207.1	246.6	205.7	202.2	207.3
176.4	173.4	197.4	194.1	190.4	248.7	220.7	216.5	297.1	214.6	209.6	239.9[1]
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	191.8	191.8	[2]
168.9	167.4	181.2	182.6	181.8	225.0	217.9	214.3	300.0	207.1	203.9	215.4
181.5	175.6	218.1	195.0	188.6	284.9	215.1	208.1	297.9	215.1	208.5	247.3
212.0	208.0	200.0	244.9	240.0	237.5	287.8	280.3	268.3	259.5	252.6	[2]
163.3	160.0	272.5	182.0	177.3	260.0	197.3	192.5	283.3	198.0	192.2	[2]
[2]	[2]	[2]	[2]	[2]	[2]	237.0	237.0	352.9	237.0	237.0	282.4
170.5	169.3	206.8	187.1	183.9	245.0	209.3	205.3	277.5	207.5	204.3	263.3
[2]	[2]	[2]	[2]	[2]	[2]	225.0	218.2	340.0	218.8	212.1	280.0
[2]	[2]	[2]	[2]	[2]	[2]	225.8	225.8	[2]	222.2	222.2	[2]
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
163.6	161.8	157.7	181.9	180.8	211.9	218.2	216.0	252.4	212.0	210.4	212.9
169.6	163.2	[2]	188.0	180.8	[2]	208.0	200.0	200.0	208.0	201.9	[2]
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
181.4	181.4	[2]	211.1	211.1	[2]	263.0	263.0	[2]	233.3	233.3	[2]
165.5	161.1	[2]	184.2	177.8	[2]	205.2	197.9	274.1	202.7	195.5	222.9
[2]	[2]	[2]	[2]	[2]	[2]	213.1	204.7	368.8	213.1	204.7	225.0
177.9	171.6	144.5	196.6	191.2	[2]	218.4	213.8	[2]	214.8	210.2	200.0
[2]	172.8	200.0	[2]	191.1	209.5	[2]	234.2	[2]	[2]	185.6	[2]
[2]	[2]	[2]	[2]	[2]	[2]	235.3	232.8	333.3	222.2	219.8	244.4
190.4	185.5	223.0	205.1	201.0	286.7	239.0	233.1	317.3	226.1	221.1	253.1
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
153.7	157.2	200.0	179.7	174.7	250.0	197.1	192.2	387.1	197.4	192.9	246.9
[2]	[2]	[2]	[2]	[2]	[2]	216.2	208.1	320.0	205.9	202.2	195.0
189.5	180.2	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
[2]	[2]	[2]	[2]	[2]	[2]	214.6	211.2	288.9	204.9	201.6	222.0
[2]	[2]	[2]	[2]	[2]	[2]	185.5	185.5	[2]	[2]	[2]	[2]
[2]	[2]	[2]	[2]	[2]	[2]	211.9	208.0	[2]	228.3	219.7	[2]
167.1	165.8	167.0	182.6	181.6	201.0	207.1	202.0	255.1	199.7	196.4	238.6
[2]	[2]	[2]	[2]	[2]	[2]	211.1	206.8	[2]	210.5	206.3	[2]
160.0	158.4	173.3	185.2	180.9	219.2	208.7	204.2	263.0	200.6	198.2	209.3
163.2	159.5	150.0	182.2	177.9	175.0	216.5	211.0	200.0	189.9	189.0	169.2
161.3	156.3	200.0	192.1	175.0	249.3	206.5	200.0	257.1	206.5	200.0	232.1
164.9	163.8	165.9	179.4	175.2	224.8	214.3	201.1	256.9	198.0	194.1	213.8
156.3	159.3	162.5	183.1	183.1	193.8	208.4	208.4	269.9	196.9	196.9	225.0
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	206.1	211.1
165.6	163.0	173.1	188.2	182.7	234.5	216.1	211.6	280.0	199.2	196.9	203.8
156.3	152.8	160.9	184.2	179.8	214.3	201.3	196.3	270.5	201.3	196.3	195.2
[2]	[2]	[2]	[2]	[2]	[2]	202.4	196.5	239.4	190.5	185.0	201.4
164.9	167.0	176.7	189.1	190.4	205.3	200.0	193.8	226.2	207.7	263.2	224.1
[2]	[2]	[2]	[2]	[2]	[2]	202.3	212.2	220.5	170.9	195.1	176.9
157.8	157.8	200.0	[2]	[2]	217.3	213.3	222.2	262.8	[2]	200.0	234.3
157.1	157.1	170.0	[2]	[2]	238.4	[2]	[2]	302.0	[2]	[2]	227.6
159.4	155.8	150.9	190.0	185.6	211.4	207.9	202.5	254.4	207.6	202.2	200.7
155.6	152.4	176.9	183.9	178.9	212.4	203.9	198.9	293.0	201.7	197.3	215.6
157.2	154.5	[2]	186.5	183.6	[2]	222.3	218.2	[2]	204.7	200.0	[2]
159.7	156.2	192.5	171.9	170.8	237.3	213.4	206.6	269.8	211.7	210.5	234.9
153.0	150.0	170.0	180.3	175.5	212.8	204.1	198.7	294.0	198.5	194.1	212.6
146.9	139.6	143.0	154.4	146.9	154.9	163.5	164.6[1]	175.6	170.1	171.4	176.7
[2]	[2]	141.0	[2]	[2]	147.4	[2]	[2]	177.4	[2]	[2]	176.0
150.0	147.2	166.1	163.9	153.1	172.9	195.6	220.0[1]	216.1	195.6	220.0	210.8
126.4	[2]	133.3	142.9	138.9	141.7	151.4	138.9	158.3	157.1	144.4	158.3
[2]	[2]	148.7	[2]	[2]	153.8	[2]	[2]	176.9	[2]	[2]	176.9
158.1	152.1	145.8	165.1	161.4	165.2	169.8	154.5	176.3	169.8	172.7	177.6
[2]	[2]	125.0	[2]	131.4	137.5	[2]	152.9	158.3	[2]	152.9	158.2
[2]	[2]	148.2	[2]	[2]	170.2	[2]	[2]	207.3	[2]	[2]	207.3
170.3	161.3	178.6	194.3	188.7	233.3	214.4	207.9	252.9	210.6	205.6	228.8
[2]	[2]	195.0	[2]	[2]	260.0	[2]	[2]	315.0	[2]	[2]	195.0
[2]	[2]	230.5	[2]	[2]	314.3	[2]	[2]	326.9	[2]	[2]	309.3
163.9	145.5	[2]	199.4	197.6	[2]	230.3	225.5	196.3	230.3	225.5	196.3
[2]	[2]	207.1	[2]	[2]	200.0	[2]	[2]	221.4	[2]	[2]	221.4
188.9	188.9	184.6	200.0	200.0	215.4	[2]	[2]	[2]	[2]	[2]	213.3
164.7	142.1	215.0	[2]	[2]	265.0	[2]	[2]	310.0	[2]	[2]	290.0
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
164.1	160.0	168.5	184.6	180.0	207.9	180.0	180.0	252.8	180.0	180.0	224.7
170.0	165.5	138.2	[2]	[2]	[2]	225.0	214.3	212.4	225.0	214.3	182.5
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]

TABLE 16: INDEXES OF RETAIL COAL PRICES FOR HOUSEHOLD 1919 TO DECEMBER,

Base, July,

Locality	July, 1921			November, 1921			March, 1922		
	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal
	Stove	Chestnut		Stove	Chestnut		Stove	Chestnut	
UNITED STATES	195.8	193.3	187.4	197.4	194.5	185.2	195.5	192.5	174.7
Eastern District	202.2	196.9	202.0	204.4	199.7	191.0	201.6	197.5	179.1
Albany, N. Y.	180.8	180.8	[2]	188.2	188.2	[2]	186.8	186.8	[2]
Baltimore, Md.	194.9	191.9	179.4	202.7	196.3	174.4	202.7	196.3	174.4
Boston, Mass.	201.7	195.1	207.4	208.4	201.6	202.1	201.7	195.1	175.5
Bridgeport, Conn.	235.1	226.3	[2]	235.1	226.3	[2]	210.8	205.3	[2]
Buffalo, N. Y.	194.3	188.6	233.3	195.8	190.0	233.3	193.6	186.8	216.7
Cambridge, Mass.	222.2	222.2	229.4	217.5	221.4	229.4	210.5	214.3	194.1
Fall River, Mass.	198.7	192.5	223.3	195.9	190.4	202.5	196.8	191.5	180.0
Lawrence, Mass.	206.3	200.0	240.0	206.3	200.0	215.0	206.3	200.0	210.0
Lowell, Mass.	212.9	212.9	[2]	206.3	206.3	[2]	209.5	209.5	[2]
Lynn, Mass.	200.0	193.8	200.0	200.0	193.8	200.0	[2]	[2]	[2]
Manchester, N. H.	200.0	198.5	181.4	200.0	198.5	177.4	194.0	192.5	165.6
Newark, N. J.	202.6	196.7	[2]	203.7	198.4	[2]	204.0	198.4	[2]
New Britain, Conn.	[2]	[2]	[2]	[2]	[2]	[2]	196.1	196.1	[2]
New Haven, Conn.	203.7	203.7	[2]	207.4	207.4	[2]	207.4	207.4	[2]
New York, N. Y.	195.1	189.1	216.9	196.6	189.6	204.8	193.1	186.3	192.8
Paterson, N. J.	208.2	200.0	187.5	213.1	204.7	187.5	207.2	203.1	187.5
Philadelphia, Pa.	207.4	202.3	200.0	210.2	206.8	200.0	206.6	203.2	173.7
Pittsburgh, Pa.	[2]	159.8	155.6	[2]	[2]	144.4	[2]	[2]	144.4
Portland, Me.	205.9	203.7	211.1	215.8	213.4	188.9	215.8	213.4	188.9
Providence, R. I.	209.5	205.3	195.1	209.5	205.3	175.3	210.0	210.2	166.3
Reading, Pa.	[2]	[2]	[2]	[2]	[2]	[2]	203.0	197.1	222.2
Rochester, N. Y.	196.3	190.0	241.9	199.3	192.7	233.9	197.8	191.2	225.8
Schenectady, N. Y.	197.4	195.3	180.0	202.2	200.0	180.0	210.8	203.0	160.0
Scranton, Pa.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Springfield, Mass.	191.9	188.8	188.9	195.1	192.0	188.9	195.1	192.0	188.9
Syracuse, N. Y.	177.9	171.7	[2]	188.8	182.0	[2]	187.3	180.6	[2]
Trenton, N. J.	197.8	194.2	[2]	211.8	203.8	[2]	199.3	195.6	[2]
Washington, D. C.	197.3	195.9	206.7	202.7	195.4	180.4	197.2	198.0	170.4
Wilmington, Del.	201.1	194.2	[2]	204.8	197.1	[2]	198.4	192.6	200.0
Middle Western District	195.9	193.9	191.9	197.9	195.4	191.6	196.4	192.9	178.0
Chicago, Ill.	189.9	187.1	155.9	199.4	192.3	166.3	198.1	192.0	168.1
Cincinnati, Ohio	206.4	196.9	203.6	206.4	200.0	203.6	193.5	187.5	187.5
Cleveland, Ohio	190.4	187.5	200.9	192.7	189.1	193.6	192.7	189.1	178.3
Columbus, Ohio	212.9	212.9	198.9	200.0	201.6	197.7	213.3	201.6	187.4
Dayton, Ohio	[2]	200.0	188.9	[2]	200.0	194.1	[2]	187.9	155.6
Detroit, Mich.	189.2	185.3	187.9	189.3	184.2	184.4	187.1	183.2	175.9
Duluth, Minn.	193.7	187.7	181.0	196.2	190.2	181.0	193.7	187.7	161.9
Grand Rapids, Mich.	185.1	182.1	196.8	187.5	182.1	183.3	187.5	182.1	174.2
Indianapolis, Ind.	197.8	195.2	177.5	203.3	200.0	182.1	203.3	199.2	144.9
Kansas City, Kan.	164.0	197.6	189.7	164.0	197.6	194.9	174.4	195.1	184.6
Kansas City, Mo.	221.1	205.9	214.1	226.3	207.1	200.0	[2]	195.6	188.4
Louisville, Ky.	195.7	195.7	201.6	195.7	195.7	199.3	194.2	194.2	171.7
Milwaukee, Wis.	204.2	198.4	187.4	207.3	201.5	191.3	204.2	198.0	185.5
Minneapolis, Minn.	196.1	190.8	200.4	199.4	194.1	206.1	197.2	191.9	206.1
Omaha, Neb.	204.7	200.0	[2]	204.7	200.0	[2]	204.7	200.0	[2]
St. Louis, Mo.	190.3	190.4	217.8	198.1	197.1	230.1	198.1	197.1	221.9
St. Paul, Minn.	192.9	187.8	192.9	196.2	191.0	196.6	194.0	188.8	187.0
Far Western District	165.6	176.3	166.0	167.1	171.8	164.4	167.1	171.8	163.7
Butte, Mont.	[2]	[2]	168.0	[2]	[2]	162.3	[2]	[2]	158.3
Denver, Col.	177.8	228.6	172.4	177.8	200.0	191.5	177.8	200.0	173.1
Los Angeles, Cal.	160.0	[2]	150.0	160.0	155.6	158.3	160.0	155.6	158.3
Portland, Ore.	[2]	[2]	166.7	[2]	[2]	164.1	[2]	[2]	164.1
Salt Lake City, Utah	169.8	181.8	171.6	169.8	181.8	158.1	169.8	181.8	162.2
San Francisco, Cal.	[2]	148.6	150.0	[2]	150.0	158.3	[2]	150.0	158.3
Seattle, Wash.	[2]	[2]	204.4	[2]	[2]	191.8	[2]	[2]	184.9
Southern District	179.4	178.1	193.1	183.4	180.8	199.3	180.1	178.1	179.8
Atlanta, Ga.	[2]	189.2	190.0	183.8	189.2	190.0	183.8	189.2	160.0
Birmingham, Ala.	[2]	[2]	242.8	[2]	[2]	245.5	[2]	[2]	186.2
Charleston, S. C.	212.1	207.3	177.8	212.1	207.3	177.8	212.1	207.3	166.7
Dallas, Tex.	[2]	[2]	207.2	[2]	[2]	217.9	[2]	[2]	217.9
Jacksonville, Fla.	171.1	171.1	166.7	184.2	184.2	173.3	184.2	184.2	173.3
Little Rock, Ark.	167.6	163.2	240.0	181.8	173.7	290.0	170.5	163.2	260.0
Macon, Ga.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Memphis, Tenn.	180.0	180.0	181.6	180.0	180.0	181.6	180.0	180.0	170.4
New Orleans, La.	170.0	161.9	149.9	175.0	169.0	169.6	167.5	165.9	148.5
Richmond, Va.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]

[1] Corrected figure.

[2] No report.

USE, IN SPECIFIED CITIES, ON SPECIFIED DATES, MARCH, 1929—(*Continued*)

1914 = 100

July, 1922			November, 1922			March, 1923			July, 1923		
Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal
Stove	Chestnut		Stove	Chestnut		Stove	Chestnut		Stove	Chestnut	
195.4	193.8	171.7	205.0	201.5	209.8	208.0	204.2	204.8	202.4	198.7	183.7
202.4	198.1	186.4	211.0	206.0	230.5	216.4	212.0	228.9	208.0	203.1	199.9
186.8	186.8	[2]	186.8	186.8	[2]	187.0	187.0	[2]	188.5	188.5	[2]
[2]	[2]	[2]	211.6	208.3	241.0	218.3	214.9	230.8	211.3	208.3	179.4
201.7	195.1	175.6	215.1	208.1	255.3	215.1	208.1	255.3	201.7	195.1	191.4
227.0	221.1	[2]	258.1	251.3	[2]	267.6	260.5	[2]	256.0	246.2	[2]
[2]	[2]	[2]	198.5	192.7	225.0	198.5	192.7	233.3	197.3	191.5	233.3
222.2	222.2	194.1	224.6[1]	228.6[1]	[2]	224.6	228.6	294.1	210.5	214.3	211.8
196.8	191.4	180.0	203.2	197.9	213.3	210.8	202.9	223.3	202.2	198.3	233.3
206.3	200.0	210.0	206.3	200.0	280.0	[2]	[2]	[2]	212.5	206.1	240.0
212.9	212.9	[2]	212.9	212.9	[2]	225.8	[2]	[2]	232.3	219.4	[2]
[2]	[2]	[2]	206.4	200.0	240.5	206.4	200.0	240.0	200.0	193.8	190.0
191.2	192.1	207.5	218.2	216.0	220.8	218.0	216.4	220.8	206.0	204.4	181.4
204.0	198.1	[2]	204.8	198.4	[2]	211.0	204.9	[2]	203.0	197.1	[2]
[2]	196.1	[2]	[2]	[2]	[2]	261.4	261.4	208.7	222.2	209.2	147.8
207.4	207.4	[2]	227.8	227.8	[2]	227.8	227.8	[2]	220.1	220.1	[2]
196.1	188.9	230.8	203.2	195.9	250.0	204.4	197.1	237.2	202.0	194.7	224.4
207.2	203.1	212.5	214.9	210.6	237.5	214.9	210.6	212.5	214.9	210.6	212.5
207.5	203.1	189.4	212.2	208.8	181.6	221.2	217.6	198.9	223.0	214.0	189.4
[2]	[2]	144.4	[2]	175.3	177.8	[2]	[2]	177.8	[2]	[2]	[2]
215.8	213.4	188.9	213.7	210.3	233.3	215.8	213.4	238.9	213.7	210.3	222.2
208.4	203.3	174.4	220.4	215.6	235.7	221.6	216.7	240.8	212.5	207.8	214.3
203.0	197.1	236.1	223.9	219.0	277.8	238.8	233.6	277.8	209.0	204.4	194.4
197.8	191.4	[2]	197.8	191.2	233.9	197.8	191.2	241.9	197.8	191.2	204.8
197.1	194.9	160.0	210.0	202.2	210.0	201.1	197.4	200.0	196.3	192.8	160.0
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
196.7	190.4	188.9	204.9	201.6	277.8	214.6	211.2	244.4	211.0	206.4	185.7
184.6	180.1	[2]	183.2	176.8	[2]	187.3	183.9	[2]	184.6	180.1	[2]
198.5	194.9	[2]	208.2	204.4	[2]	223.0	219.0	[2]	208.2	204.4	[2]
199.3	199.3	185.4	211.4	212.9	229.7	219.6	221.1	203.9	209.4	207.4	192.7[1]
197.8	192.4	194.4	206.8	201.7	216.7	213.3	207.1	216.7	211.1	204.9	205.6
197.3	192.9	182.4	199.4	195.2	227.6	202.7	196.7	223.4	198.7	195.6	197.6
198.5	192.4	174.8	213.1	202.4	199.2	213.1	202.4	196.6	210.1	200.0	186.6
206.4	200.0	201.8	[2]	200.0	271.4	[2]	[2]	257.1	[2]	200.0	228.6
189.5	183.5	183.7	192.7	186.8	239.0	210.0	203.7	245.9	196.0	193.4	222.0
200.0	200.0	186.2	[2]	217.7	255.0	[2]	212.5	250.6	[2]	211.3	213.8
[2]	[2]	183.3	[2]	[2]	238.9	[2]	200.0	233.3	[2]	200.0	207.4
193.4	185.3	186.2	204.3	200.0	244.8	206.4	202.1	237.9	206.4	202.1	224.1
193.7	187.7	171.4	193.7	187.7	228.6	193.7	187.7	228.6	193.7	187.7	166.7
185.2	180.0	185.5	193.4	187.9	212.7	202.4	196.5	222.9	198.8	193.0	185.0
205.4	193.8	151.3	196.9	193.8	199.3	208.3	193.8	178.2	200.0	201.6	160.8
174.4	195.1	169.2	174.4	178.0	200.0	167.4	175.6	184.6	167.4	168.3	179.4
[2]	[2]	188.6	[2]	186.7	211.4	[2]	186.7	185.7	[2]	186.7	185.7
205.9	205.9	188.7	[2]	[2]	260.2	[2]	[2]	252.6	[2]	211.4	209.1
205.2	198.8	180.4	207.4	200.3	225.7	207.4	200.3	234.8	202.8	196.8	189.6
194.4	189.2	206.1	194.4	188.4	235.0	194.4	188.4	228.6	194.4	187.6	215.1
[2]	[2]	[2]	[2]	[2]	[2]	[2]	190.9	[2]	[2]	181.8	[2]
199.4	197.1	210.8	198.1	196.1	243.4	204.4	200.2	241.8	200.2	199.2	206.9
191.3	186.2	195.5	198.5	192.7	217.9	196.7	190.7	210.4	191.3	184.6	185.9
157.7	169.2	147.4	168.9	190.4	156.1	165.6	164.2	152.5	163.0	150.0	149.4
[2]	[2]	154.9	[2]	[2]	155.4	[2]	[2]	146.1	[2]	[2]	149.7
172.2	196.0	168.4	[2]	[2]	200.0	194.4	190.9	194.1	183.3	181.8	189.5
142.9	[2]	116.7	160.0	[2]	137.5	160.0	[2]	137.5	154.3	[2]	129.2
[2]	[2]	153.8	[2]	[2]	153.8	[2]	[2]	153.8	[2]	[2]	143.6
169.8	181.8	157.6	200.0	190.4	167.8	162.8	190.4	155.8	175.0	[2]	156.0
[2]	134.3	137.5	[2]	[2]	[2]	[2]	140.0	145.8	[2]	140.0	145.8
[2]	[2]	172.0	[2]	[2]	176.8	[2]	[2]	168.3	[2]	[2]	170.0
185.6	184.4	171.7	205.7	192.1	205.7	196.4	191.7	196.5	201.9	192.9	176.4
[2]	[2]	170.0	200.0	[2]	230.0	200.0	[2]	230.0	200.0	200.0	180.0
[2]	[2]	165.5	[2]	[2]	227.6	[2]	[2]	206.7	[2]	[2]	208.6
212.1	207.3	166.7	212.1	207.2	177.8	212.1	207.3	177.8	212.1	207.3	177.8
[2]	[2]	200.0	[2]	[2]	217.9	[2]	[2]	217.9	[2]	[2]	[2]
184.2	184.2	173.3	[2]	[2]	200.0	[2]	[2]	200.0	194.7	194.7	186.7
[2]	[2]	[2]	[2]	187.5	233.3	[2]	187.5	183.3	[2]	200.0	183.3
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
[2]	[2]	[2]	[2]	180.0	194.4	180.0	180.0	198.3	[2]	180.0	157.8
165.0	166.7	152.0	[2]	195.2	166.7	[2]	204.8	166.7	[2]	[2]	143.1
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]

TABLE 16: INDEXES OF RETAIL COAL PRICES FOR HOUSEHOLD 1919 TO DECEMBER,

Base, July,

Locality	November, 1923			March, 1924			July, 1924		
	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal
	Stove	Chestnut		Stove	Chestnut		Stove	Chestnut	
UNITED STATES	212.4	208.1	182.4	210.4	204.7	174.1	203.3	198.4	162.2
Eastern District	219.9	215.1	190.2	217.5	211.0	178.6	210.5	203.9	167.1
Albany, N. Y.	198.3	198.3	[2]	196.6	196.6	[2]	197.3	197.3	[2]
Baltimore, Md.	223.8	218.2	174.4	224.9	219.3	171.8	211.6	203.9	161.5
Boston, Mass.	215.1	208.1	170.2	208.4	201.6	159.6	210.1	203.3	159.6
Bridgeport, Conn.	264.0	253.8	[2]	264.0	253.8	[2]	248.0	238.4	[2]
Buffalo, N. Y.	206.3	200.2	191.7	204.9	199.6	191.7	202.0	195.4	191.7
Cambridge, Mass.	224.6	228.6	188.2	217.5	221.4	[2]	217.5	221.4	176.4
Fall River, Mass.	214.8	210.8	210.0	205.0	200.8	196.7	196.7	193.6	175.0
Lawrence, Mass.	218.8	212.1	200.0	206.3	200.0	190.0	206.3	200.0	190.0
Lowell, Mass.	238.7	229.0	[2]	[2]	[2]	[2]	212.9	212.9	[2]
Lynn, Mass.	206.4	200.0	170.0	206.4	200.0	170.0	193.5	187.5	150.0
Manchester, N. H.	211.8	205.9	212.4	213.9	202.0	212.4	209.0	200.0	183.4
Newark, N. J.	217.2	210.9	[2]	215.4	208.7	[2]	210.4	204.0	[2]
New Britain, Conn.	[2]	[2]	[2]	228.8	228.8	147.8	205.9	199.3	130.4
New Haven, Conn.	233.3	233.3	[2]	235.1	235.1	[2]	214.8	214.8	[2]
New York, N. Y.	213.2	205.5	211.5	213.2	205.5	198.7	206.4	199.0	198.7
Paterson, N. J.	228.9	232.3	175.0	218.1	213.8	175.0	208.8	204.7	168.8
Philadelphia, Pa.	235.4	228.0	163.6	226.7	223.0	189.4	222.9	213.9	173.7
Pittsburgh, Pa.	[2]	[2]	[2]	[2]	170.1	144.4	[2]	159.8	144.4
Portland, Me.	225.5	223.1	200.0	225.5	219.8	183.3	222.2	216.6	165.0
Providence, R. I.	231.3	226.7	201.0	229.3	224.2	180.6	217.7	213.3	170 4
Reading, Pa.	223.9	219.0	236.1	223.9	219.0	222.2	212.7	208.0	208.3
Rochester, N. Y.	206.9	200.4	196.8	206.9	200.4	196.8	207.0	197.9	196.8
Schenectady, N. Y.	206.6	202.9	150.0	206.6	202.9	150.0	203.7	200.0	130.0
Scranton, Pa.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Springfield, Mass.	215.9	211.2	181.0	211.4	206.9	161.9	203.1	198.7	147.6
Syracuse, N. Y.	194.9	190.2	[2]	194.9	190.2	[2]	191.9	187.3	[2]
Trenton, N. J.	223.0	219.0	[2]	220.4	212.1	[2]	220.4	209.8	[2]
Washington, D. C.	222.3	220.7	162.0	222.3	220.7	167.6	209.4	207.4	164.8
Wilmington, Del.	228.3	221.7	194.4	229.8	221.4	183.3	214.8	206.4	172.2
Middle Western District	205.4	203.3	191.0	202.9	202.4	183.2	197.4	196.5	167.2
Chicago, Ill.	218.6	211.0	178.2	212.0	205.5	156.6	208.2	201.8	158.7
Cincinnati, Ohio	[2]	206.3	228.6	212.9	206.3	207.1	212.9	206.3	185.7
Cleveland, Ohio	206.0	203.3	215.6	206.0	202.2	196.3	189.4	186.9	184.9
Columbus, Ohio	[2]	240.0	206.9	[2]	227.4	198.3	[2]	221.0	178.4
Dayton, Ohio	[2]	206.1	192.6	[2]	200.0	177.8	[2]	187.9	162.5
Detroit, Mich.	212.9	208.4	200.0	202.2	195.8	189.7	193.5	187.5	180.6
Duluth, Minn.	202.5	196.3	161.9	202.5	196.3	161.9	200.0	193.9	161.9
Grand Rapids, Mich.	202.4	196.5	188.9	196.4	190.8	168.6	184.5	179.2	156.1
Indianapolis, Ind.	206.3	212.7	147.5	[2]	220.5	153.8	203.2	205.6	135.9
Kansas City, Kan.	155.8	163.4	169.2	155.8	192.7	169.2	137.2	178.0	164.1
Kansas City, Mo.	[2]	195.6	177.1	[2]	195.6	182.9	[2]	186.7	182.9
Louisville, Ky.	[2]	[2]	219.9	[2]	[2]	219.9	217.6	214.4	182.6
Milwaukee, Wis.	212.7	204.3	191.0	212.7	204.9	177.8	210.1	201.8	153.1
Minneapolis, Minn.	201.7	195.4	205.4	201.7	195.4	184.7	198.9	191.9	184.4
Omaha, Neb.	[2]	195.4	[2]	[2]	190.9	[2]	[2]	181.8	[2]
St. Louis, Mo.	210.7	209.4	213.7	210.7	209.4	221.2	198.1	197.1	191.8
St. Paul, Minn.	199.2	192.3	180.6	199.3	192.4	176.3	195.6	188.8	169.7
Far Western District	164.5	144.2	155.9	165.8	146.4	150.0	164.4	145.8	145.0
Butte, Mont.	[2]	[2]	153.9	[2]	[2]	149.0	[2]	[2]	145.1
Denver, Col.	177.8	150.0	200.0	166.7	146.0	155.8	169.4	154.0	167.0
Los Angeles, Cal.	158.8	[2]	119.2	[2]	[2]	[2]	152.9	[2]	109.6
Portland, Ore.	[2]	[2]	153.8	[2]	[2]	164.1	[2]	[2]	148.7
Salt Lake City, Utah	152.2	[2]	155.3	165.1	156.5	132.6	175.0	[2]	149.3
San Francisco, Cal.	[2]	140.0	145.8	[2]	140.0	150.0	[2]	140.0	129.2
Seattle, Wash.	[2]	[2]	173.7	[2]	[2]	171.2	[2]	[2]	172.4
Southern District	211.1	204.2	181.1	210.2	205.9	174.3	195.7	191.9	164.8
Atlanta, Ga.	212.6	218.1	179.4	214.1	218.1	179.4	194.6	197.3	156.4
Birmingham, Ala.	[2]	[2]	237.9	[2]	[2]	216.7	[2]	[2]	210.3
Charleston, S. C.	[2]	[2]	[2]	212.1	207.3	177.8	212.1	207.3	163.0
Dallas, Tex.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	200.0
Jacksonville, Fla.	194.7	[2]	160.0	184.2	184.2	120.0	184.2	184.2	106.7
Little Rock, Ark.	[2]	212.5	200.0	[2]	212.5	200.0	[2]	[2]	[2]
Macon, Ga.	[2]	[2]	180.0	[2]	[2]	180.0	[2]	[2]	170.0
Memphis, Tenn.	[2]	185.0	157.8	[2]	190.0	161.1	[2]	190.0	161.1
New Orleans, La.	217.5	207.1	170.3	220.0	209.5	178.2	195.0	185.7	160.6
Richmond, Va.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]

[1] Corrected figure.

[2] No report.

USE, IN SPECIFIED CITIES, ON SPECIFIED DATES, MARCH, 1929—(*Continued*)

1914 = 100

November, 1924			March, 1925			July, 1925			November, 1925[3]	December, 1925[3]
Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Bituminous Coal	Bituminous Coal
Stove	Chestnut		Stove	Chestnut		Stove	Chestnut			
207.3	201.4	167.2	207.7	202.1	166.9	205.8	197.4	159.7	177.7	179.7
215.2	208.2	170.8	216.0	208.8	170.0	213.2	203.0	166.7	193.9	197.0
200.0	200.0	[2]	203.4	200.0	[2]	204.2	193.7	[2]	[2]	[2]
219.6	209.3	200.0	218.3	208.3	164.1	214.8	205.0	130.4	139	139
215.1	208.1	159.6	215.7	208.7	159.6	215.7	205.4	159.6	199	181
248.0	238.4	[2]	244.0	234.6	[2]	240.0	230.8	[2]	[2]	[2]
205.0	197.6	191.7	206.3	198.3	191.7	205.5	193.9	166.7	186	188
224.6	228.6	176.4	224.6	228.6	194.1	224.6	225.0	188.2	228	228
202.9	199.8	181.7	204.3	202.8	190.0	211.8	205.0	181.7	196	196
206.3	200.0	180.0	215.6	209.1	180.0	206.3	197.0	180.0	205	210
[2]	[2]		222.6	219.4	[2]	[2]	[2]	[2]	[2]	[2]
206.4	200.0	150.0	206.4	200.0	150.0	[2]	[2]	[2]	[2]	[2]
210.9	202.0	193.1	204.0	198.0	193.1	202.0	196.0	193.1	228	257
213 7	206.5	[2]	216.6	207.5	[2]	213.9	200.0	[2]	[2]	[2]
215.7	215.7	134.8	215.7	215.7	130.4	209.2	202.6	126.1	165	165
225.9	225.9	[2]	223.9	223.9	[2]	218.5	218.5	[2]	[2]	[2]
210.7	201.9	198.7	213.2	205.5	198.7	218.3	202.9	198.7	224	241
216.9	210.6	187.5	214.9	210.6	181.3	216.9	204.7	181.3	[2]	[2]
224.9	216.7	173.7	224.9	219.4	173.7	215.7	205.0	168.4	179	179
[2]	159.8	133.3	[2]	159.8	133.3	[2]	154.6	144.4	138	138
225.5	223.1	166.9	222.4	220.0	166.7	222.2	219.8	175.0	183	197
226.1	220.0	174.4	225.6	220.0	175.5	221.1	213.3	167.9	212	209
220.1	215.3	208.3	220.1	215.3	208.3	209.7	200.7	194.4	201	201
207 1	201.2	188.7	207.1	201.2	188.7	209.9	197.9	169.4	178	178
206.6	202.9	150.0	210.3	202.9	150.0	207.3	196.4	150.0	230	230
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
210.8	205.6	147.6	214.1	208.9	147.6	210.2	199.1	141.7	167	172
194.9	190.2	[2]	197.1	186.6	[2]	200.0	188.0	[2]	[2]	[2]
224.4	212.1	[2]	228.3	219.7	[2]	220.4	208.3	[2]	[2]	[2]
214.5	210.9	164.8	211.4	203.9	154.6	207.8	202.4	159.2	177	180
218.6	209.3	172.2	218.6	209.3	172.2	109.6	196.9	163.9	171	175
201.3	199.3	173.7	202.5	199.6	173.1	201.4	195.9	163.2	168.5	170.4
211.4	201.8	161.3	211.1	204.7	156.3	207.4	198.8	156.8	163	173
206.4	203.1	185.7	206.4	200.0	176.4	206.4	196.9	171.4	198	198
196.0	193.4	190.4	199.3	196.7	190.8	192.7	190.2	179.4	194	193
[2]	221.0	181.9	[2]	221.0	184.4	[2]	216.1	172.4	205	205
[2]	193.9	154.2	[2]	193.9	166.7	[2]	193.9	156.7	193	193
197.8	191.6	170.7	197.8	191.6	170.7	193.8	181.8	178.9	200	203
202.5	196.3	147.6	202.5	196.3	142.9	200.0	193.9	157.1	143	143
190.4	185.0	170.8	190.4	185.0	170.8	184.5	179.2	149.3	181	181
209.5	210.4	162.5	209.5	208.8	158.7	203.2	204.0	144.2	161	161
148.8	182.9	174.4	172.1	180.4	174.4	[2]	[2]	[2]	[2]	[2]
[2]	195.6	182.9	[2]	195.6	185.7	[2]	191.1	182.9	183	183
217.6	217.6	190.9	217.6	217.6	190.9	208.7	211.8	159.3	188	188
212.7	204.3	158.9	212.7	204.3	158.9	210.1	201.8	151.6	181	181
201.1	194.1	193.7	201.1	194.1	192.6	202.3	195.1	184.3	184	184
[2]	190 9	[2]	[2]	190.9	[2]	[2]	181.8	[2]	[2]	[2]
204.4	203.3	202.8	204.4	203.3	204.1	201.3	194.0	191.1	207	219
197.8	191.0	167.7	197.8	191.0	164.5	195.6	188.8	170.9	171	171
166.6	155.3	148.1	163.3	148.0	151.5	164.4	145.8	148.0	153.0	152.8
[2]	[2]	148.6	[2]	[2]	146.1	[2]	[2]	144.1	147	147
175.7	158.0	172.0	162.6	147.2	172.0	172.2	154.0	179.6	198	198
155.9	[2]	109.6	155.9	[2]	126.9	144.1	[2]	119.2	125	125
[2]	[2]	159.0	[2]	[2]	159.0	[2]	[2]	153.8	159	159
167.4	163.6	148.4	169.8	156.5	148.4	185.0	[2]	147.6	148	146
[2]	142.9	137.5	[2]	142.9	141.7	[2]	140.0	133.3	137	140
[2]	[2]	172 4	[2]	[2]	182.2	[2]	[2]	172.0	179	179
202.1	196.4	174.1	201.1	197.9	168.4	193.4	189.0	152.8	180.3	181.6
194.6	197.3	161.5	200.0	202.7	161.5	191.8	191.8	143.6	170	173
[2]	[2]	213.8	[2]	[2]	210.3	[2]	[2]	194.8	207	218
212.1	207.3	163.0	212.1	207.3	163.0	212.1	207.3	163.0	163	163
[2]	[2]	200.0	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
194.7	194.7	133.3	184.2	184.2	120.0	184.2	184 2	120.0	133	133
[2]	[2]	183.3	[2]	[2]	183.3	[2]	[2]	166.7	[2]	[2]
[2]	[2]	180.0	[2]	[2]	172.5	[2]	[2]	150.0	172	173
[2]	190.0	161.1	[2]	190.0	161.1	[2]	190.0	144.4	156	162
205.0	195.2	174.5	210.0	200.0	175.2	190.0	181.0	147.5	171	171
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]

[3] Owing to the anthracite strike, indexes for stove and chestnut were not computed for November or December, 1925.

TABLE 16: INDEXES OF RETAIL COAL PRICES FOR HOUSEHOLD 1919 TO DECEMBER,

Base, July,

Locality	March, 1926			July, 1926			November, 1926		
	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal
	Stove	Chestnut		Stove	Chestnut		Stove	Chestnut	
UNITED STATES	218.5	209.6	178.5	211.3	201.9	163.9	215.1	205.5	190.7
Eastern District	227.4	215.5	190.0	219.6	205.9	175.3	222.0	208.3	202.3
Albany, N. Y.	273.1	192.3	[2]	277.4	187.7	[2]	277.4	187.7	[2]
Baltimore, Md.	270.2	218.6	119.8	286.1	231.7	113.5	286.1	231.7	128.7
Bloomfield, N. J.	[2]	[2]	[2]	215.4	200.0	199.3	215.4	200.0	199.3
Boston, Mass.	280.4	256.0	180.8	251.7	226.4	177.2	255.6	229.7	232.5
Bridgeport, Conn.	[2]	[2]	200.0	151.6	145.8	200.0	161.8	155.6	222.2
Buffalo, N. Y.	215.4	190.3	179.2	214.1	189.2	174.9	214.5	189.2	214.1
Cambridge, Mass.	313.7	319.2	219.1	283.3	283.7	207.5	287.5	288.2	240.3
Fall River, Mass.	241.3	248.3	211.0	223.5	225.0	211.0	223.5	225.0	211.0
Lawrence, Mass.	215.8	205.9	204.9	209.5	199.9	195.0	215.6	205.7	240.0
Lowell, Mass.	229.0	229.9	[2]	226.0	226.5	[2]	232.6	233.3	[2]
Lynn, Mass.	186.0	183.2	259.2	180.6	175.1	221.4	180.6	175.1	288.9
Manchester, N. H.	190.1	188.6	231.7	186.5	184.1	193.1	193.2	189.4	205.3
Newark, N. J.	178.0	159.6	[2]	176.4	158.2	[2]	176.4	158.2	[2]
New Britain, Conn.	[2]	[2]	217.5	185.9	191.8	204.1	191.7	197.7	251.7
New Haven, Conn.	[2]	[2]	207.8	225.8	218.5	177.1	227.6	220.2	187.0
New York, N. Y.	234.2	229.2	235.1	220.6	216.4	197.6	220.6	216.4	205.9
Paterson, N. J.	241.0	236.1	314.5	223.0	216.5	167.8	223.0	216.5	207.3
Philadelphia, Pa.	230.6	213.7	169.4	226.9	209.4	166.7	226.9	209.4	172.2
Pittsburgh, Pa.	[2]	135.2	141.7	[2]	135.2	139.4	[2]	139.8	185.8
Portland, Me.	210.6	207.4	200.6	207.0	203.3	188.9	209.9	206.1	275.1
Providence, R. I.	260.2	246.7	218.3	239.1	222.3	192.1	241.5	226.7	242.8
Reading, Pa.	315.9	331.3	[2]	296.3	305.5	201.4	296.3	305.5	214.8
Rochester, N. Y.	238.3	224.8	182.2	238.3	224.8	159.5	238.3	224 8	163.4
Schenectady, N. Y.	221.1	215.2	238.0	213.7	207.8	208.2	221.0	215.3	208.2
Springfield, Mass.	214.8	205.1	147.3	208.3	195.7	138.0	212.4	199.8	143.8
Syracuse, N. Y.	235.4	229.7	[2]	235.4	234.1	[2]	235.4	234.1	[2]
Trenton, N. J.	259.0	224.1	171.6	235.9	200.8	166.6	235.9	200.8	179.0
Washington, D. C.	227.8	241.0	172.4	214.8	232.1	151.8	219.3	235.2	192.9
Wilmington, Del.	229.1	219.8	177.9	222.9	208.8	175.8	222.9	208.8	199.2
Middle Western District	210.6	205.0	181.9	207.5	203.7	166.4	212.4	208.4	201.8
Chicago, Ill.	274.8	271.9	161.4	286.0	279.2	152.4	289.1	282.9	179.1
Cincinnati, Ohio	[2]	244.4	181.4	264.1	244.4	160.7	266.7	248.1	221.6
Cleveland, Ohio	202.1	221.3	204.1	200.5	210.7	200.2	211.7	213.4	222.9
Columbus, Ohio	[2]	167.5	187.3	[2]	161.5	156.4	[2]	164.1	219.7
Dayton, Ohio	[2]	163.6	173.9	[2]	206.0	179.6	[2]	206.0	232.8
Detroit, Mich.	175.5	160.4	230.0	180.6	164.4	217.8	184.9	168.3	266.9
Duluth, Minn.	202.6	196.4	157.1	270.1	251.3	157.1	270.1	251.3	172.8
Grand Rapids, Mich.	197.6	186.7	164.6	191.5	181.0	143.3	197.5	186.7	177.4
Indianapolis, Ind.	127.4	167.5	159.6	118.1	155.3	137.2	121.6	160.6	178.6
Kansas City, Kan.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Kansas City, Mo.	[2]	[2]	182.9	[2]	[2]	[2]	[2]	[2]	[2]
Louisville, Ky.	[2]	[2]	187.7	223.5	223.5	163.1	266.5	252.9	236.0
Milwaukee, Wis.	212.1	185.4	177.8	212.7	184.8	147.0	212.7	184.8	172.9
Minneapolis, Minn.	202.8	197.2	180.4	202.8	197.2	180.4	202.8	197.2	196.2
Omaha, Neb.	[2]	232.8	[2]	[2]	220.4	[2]	[2]	227.9	[2]
St. Louis, Mo.	214.0	206.2	233.7	207.8	200.0	208.9	217.2	210.3	258.3
St. Paul, Minn.	197.8	192.0	168.3	197.8	191.4	165.8	197.8	191.4	174.6
Far Western District	177.1	153.5	154.5	167.9	146.6	141.8	174.5	148.4	154.4
Butte, Mont.	[2]	[2]	150.7	[2]	[2]	148.2	[2]	[2]	149.1
Denver, Colo.	172.2	154.0	200.5	169.3	148.0	180.4	174.8	[2]	201.0
Los Angeles, Cal.	178.6	[2]	123.0	158.3	[2]	119.1	171.1	[2]	122.9
Portland, Ore.	[2]	[2]	162.9	[2]	[2]	141.8	[2]	[2]	160.2
Salt Lake City, Utah	185.0	156.5	147.6	185.0	156.5	125.4	185.0	156.5	160.0
San Francisco, Cal.	150.0	145.7	141.5	144.1	140.0	133.2	147.0	142.8	137.3
Seattle, Wash.	[2]	[2]	178.5	[2]	[2]	161.6	[2]	[2]	183.6
Southern District	214.8	213.9	185.4	193.0	189,0	164.6	201.4	198.4	193.3
Atlanta, Ga.	219.2	[2]	172.9	207.4	208.2	149.0	207.4	208.2	207.7
Birmingham, Ala.	[2]	[2]	223.4	[2]	[2]	208.3	[2]	[2]	228.8
Charleston, S. C.	218.3	194.0	163.0	188.0	188.0	163.0	188.0	188 0	163.0
Dallas, Tex.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	189.9
Jacksonville, Fla.	194.7	[2]	186.7	184.2	170.4	160.0	211.5	195.6	186.7
Little Rock, Ark.	[2]	[2]	181.9	[2]	[2]	[2]	[2]	[2]	159.2
Macon, Ga.	[2]	[2]	176.1	[2]	[2]	159.0	[2]	[2]	217.3
Memphis, Tenn.	[2]	266.8	161.3	[2]	227.0	132.4	[2]	238.3	172.5
New Orleans, La.	220.3	209.8	177.5	195.2	185.3	148.6	211.9	199.9	177.6
Richmond. Va.	[2]	[2]	[2]	[2]	[2]	[2]	219.9	219.9	211.7

[1] Corrected figure.

[2] No report.

USE, IN SPECIFIED CITIES, ON SPECIFIED DATES, MARCH, 1929—(*Continued*)

1914 = 100

January, 1927			March, 1927			July, 1927			November, 1927		
Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal
Stove	Chestnut		Stove	Chestnut		Stove	Chestnut		Stove	Chestnut	
215.3	205.7	184.3	214.7	205.1	180.1	208.4	197.7	169.1	212.1	201.5	173.4
222.2	208.7	193.1	221.3	208.1	189.4	215.0	200.5	180.1	219.5	204.9	180.1
277.4	187.7	[2]	277.4	187.7	[2]	268.2	181.2	[2]	272.8	184.5	[2]
286.1	231.7	124.3	286.1	231.7	122.1	280.0	222.7	109.0	285.8	227.6	111.2
215.4	200.0	199.3	215.4	200.0	199.3	211.5	196.3	192.6	215.3	200.0	199.1
256.9	230.8	223.9	256.9	230.8	214.0	248.9	223.8	180.7	254.1	228.5	176.9
161.8	155.6	222.2	156.8	150.8	222.2	146.6	141.0	200.0	151.5	145.8	200.0
214.7	189.2	214.1	214.7	189.2	194.1	214.5	188.1	194.1	218.4	191.8	190.5
287.5	288.2	240.3	287.5	288.2	224.0	278.9	279.2	172.1	283.3	283.6	172.1
223.5	225.0	211.0	223.5	225.0	211.0	220.3	220.1	211.0	226.0	225.2	211.0
215.6	205.7	220.1	215.6	205.7	220.1	215.2	205.3	220.1	215.2	205.3	210.0
232.6	233.3	[2]	232.6	233.3	[2]	221.5	221.7	[2]	232.3	233.0	[2]
186.2	180.6	288.9	186.2	180.6	269.5	175.2	167.1	231.0	180.6	172.4	231.0
193.2	189.4	205.3	193.2	189.4	205.3	186.2	180.6	198.9	191.4	185.7	196.5
176.4	158.2	[2]	174.8	156.8	[2]	173.2	155.1	[2]	176.3	158.0	[2]
194.6	200.7	238.1	180.0	185.6	224.5	[2]	[2]	[2]	185.8	191.6	224.2
229.4	222.0	187.0	229.4	222.0	187.0	218.4	211.3	177.1	223.9	216.6	177.1
220.6	216.4	206.6	217.5	213.4	206.6	214.6	209.0	210.7	223.1	217.3	210.7
223.0	216.5	184.1	223.0	216.5	184.1	219.1	210.4	184.1	223.3	214.4	184.1
226.9	209.4	172.2	226.9	209.4	168.1	211.8	193.3	159.9	213.7	196.8	159.9
[2]	139.8	165.9	[2]	139.8	165.9	[2]	130.6	154.4	[2]	130.6	154.4
209.9	206.1	233.6	209.9	206.1	221.7	207.0	203.0	213.3	209.9	205.8	212.0
241.5	226.7	221.2	241.5	226.7	217.7	234.0	217.0	196.8	239.4	222.3	191.2
296.3	305.5	214.8	291.3	301.8	214.8	282.7	288.7	210.5	289.8	293.2	201.5
238.3	224.8	172.7	238.3	224.8	172.7	234.4	220.6	172.7	238.6	224.6	186.0
221.0	215.3	208.2	221.0	215.3	208.2	220.3	213.3	208.2	224.0	217.1	208.2
212.4	199.8	143.8	212.4	199.8	143.8	208.5	195.8	143.0	211.6	198.7	143.9
235.4	234.1	[2]	232.6	231.1	[2]	231.3	229.6	[2]	235.5	234.0	[2]
235.9	202.0	175.8	235.9	202.0	182.1	224.9	192.9	167.3	230.3	197.5	167.3
216.7	233.8	171.5	215.4	233.3	165.3	206.7	220.0	160.7	210.0	223.7	161.6
222.9	208.8	192.8	222.9	208.8	184.8	213.8	197.9	182.6	217.6	201.7	182.6
212.0	208.0	193.0	211.6	207.8	185.6	205.8	199.7	173.2	208.9	202.9	179.3
290.3	283.7	179.6	290.3	283.7	171.3	280.9	270.3	171.3	284.8	274.7	171.3
226.7	248.0	185.2	266.7	248.0	173.2	261.4	240.6	165.0	261.4	240.6	165.0
211.7	213.4	213.5	211.7	213.4	212.0	205.7	205.5	200.4	207.3	209.0	202.0
[2]	164.1	190.6	[2]	164.1	184.9	[2]	154.9	168.4	[2]	154.9	178.0
[2]	206.0	198.0	[2]	206.0	183.4	[2]	206.0	190.4	[2]	206.0	192.3
184.9	168.3	260.5	182.1	168.3	251.0	174.9	158.9	228.7	178.4	162.2	233.6
270.1	251.3	178.0	270.1	251.3	178.0	267.5	248.8	172.8	273.4	251.4	172.8
197.5	186.7	177.4	197.5	182.6	153.1	191.6	177.1	146.2	197.5	184.3	151.8
121.6	160.6	173.3	121.6	160.6	161.7	118.1	155.0	140.4	119.8	156.7	154.8
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
247.8	235.2	216.9	247.8	235.2	203.2	[2]	223.4	170.7	[2]	229.2	195.1
212.7	184.8	170.1	212.7	184.8	163.3	207.7	177.1	149.8	210.8	179.9	152.5
202.8	197.2	200.1	202.8	197.2	200.1	200.5	191.5	175.5	203.3	194.2	188.8
[2]	227.9	[2]	[2]	227.9	[2]	[2]	227.9	[2]	[2]	227.9	[2]
218.1	210.3	268.9	218.1	210.3	268.9	207.6	197.8	255.9	210.3	200.4	259.8
197.8	191.4	177.0	197.8	191.4	177.0	195.4	186.0	165.7	198.1	188.6	174.3
175.7	150.0	155.3	175.7	150.0	154.8	171.3	146.6	145.0	176.2	148.4	153.4
[2]	[2]	149.1	[2]	[2]	148.7	[2]	[2]	148.7	[2]	[2]	148.7
174.8	152.0	201.0	174.8	[2]	201.0	168.4	[2]	173.9	169.4	[2]	197.8
171.1	[2]	126.7	171.1	[2]	124.8	167.7	[2]	119.1	176.2	[2]	126.8
[2]	[2]	160.2	[2]	[2]	160.2	[2]	[2]	152.4	[2]	[2]	157.6
185.0	156.5	160.0	185.0	156.5	160.0	185.0	156.5	142.6	185.0	156.5	169.5
152.9	148.5	141.4	152.9	148.5	141.4	144.0	139.9	129.0	149.9	145.6	137.3
[2]	[2]	183.6	[2]	[2]	183.6	[2]	[2]	173.2	[2]	[2]	158.2
202.2	199.2	194.8	202.2	199.6	191.7	192.2	187.8	169.4	197.6	192.9	182.9
207.4	208.2	175.7	207.4	208.2	175.7	207.4	208.2	149.0	207.4	208.2	170.3
[2]	[2]	240.0	[2]	[2]	238.3	[2]	[2]	233.4	[2]	[2]	244.4
188.0	185.0	163.0	188.0	188.5	163.0	188.0	186.2	163.0	188.0	186.2	163.0
[2]	[2]	189.9	[2]	[2]	189.9	[2]	[2]	[2]	[2]	[2]	[2]
211.5	195.6	186.7	211.5	195.6	186.7	195.6	180.9	160.0	211.4	195.6	186.7
[2]	[2]	[2]	[2]	[2]	166.8	[2]	[2]	151.6	[2]	[2]	166.8
[2]	[2]	214.0	[2]	[2]	202.1	[2]	[2]	166.2	[2]	[2]	185.0
[2]	238.3	184.1	[2]	238.3	184.1	[2]	226.9	172.7	[2]	226.9	172.7
217.4	204.7	185.9	217.4	204.7	185.9	195.0	182.8	148.8	205.9	195.0	169.5
219.9	219.9	211.7	219.9	219.9	188.2	206.5	206.5	188.3	206.5	206.5	188.3

TABLE 16: INDEXES OF RETAIL COAL PRICES FOR HOUSEHOLD 1919 TO DECEMBER, Base, July,

Locality	March, 1928			July, 1928			November, 1928		
	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal
	Stove	Chestnut		Stove	Chestnut		Stove	Chestnut	
UNITED STATES	212.5	201.9	171.9	204.2	194.9	162.8	210.8	201.6	167.8
Eastern District	219.5	205.1	176.8	209.9	197.3	172.1	217.1	204.5	172.0
Albany, N. Y.	275.8	186.7	[2]	269.8	184.6	[2]	276.3	187.9	[2]
Baltimore, Md.	285.8	228.7	111.2	270.8	220.2	106.9	284.5	232.6	108.8
Bloomfield, N. J.	215.3	200.0	199.1	211.4	196.3	205.7	215.2	200.0	205.7
Boston, Mass.	254.1	228.5	176.9	242.4	217.8	166.1	250.8	226.0	169.3
Bridgeport, Conn.	151.5	145.8	177.8	146.5	141.0	177.8	156.6	150.7	177.8
Buffalo, N. Y.	218.4	191.8	190.5	213.7	187.5	183.3	219.0	191.4	183.3
Cambridge, Mass.	283.3	283.6	172.1	270.2	270.4	157.1	276.7	276.9	167.0
Fall River, Mass.	225.1	225.2	211.0	216.1	218.4	211.0	222.4	228.3	211.0
Lawrence, Mass.	215.2	205.3	199.9	190.7	175.9	179.9	202.9	219.3	179.9
Lowell, Mass.	232.3	233.0	[2]	205.8	205.5	[2]	225.8	226.1	[2]
Lynn, Mass.	180.6	172.4	231.0	169.7	167.1	209.3	177.9	172.4	209.3
Manchester, N. H.	191.4	184.4	191.6	179.7	172.4	183.6	185.1	178.3	183.6
Newark, N. J.	176.3	158.0	[2]	173.2	155.1	[2]	176.3	158.0	[2]
New Britain, Conn.	185.8	191.6	224.2	174.2	179.7	224.2	182.9	188.7	224.9
New Haven, Conn.	223.9	216.6	177.1	222.3	215.0	172.0	225.9	218.4	172.0
New York, N. Y.	223.1	217.3	206.3	219.4	210.6	206.3	223.0	214.2	203.2
Paterson, N. J.	223.3	214.4	184.1	215.0	210.4	184.1	221.7	214.4	184.1
Philadelphia, Pa.	212.0	195.0	157.2	206.4	185.4	147.7	215.8	190.5	147.7
Pittsburgh, Pa.	[2]	130.6	151.0	[2]	128.2	140.5	[2]	128.2	144.0
Portland, Me.	209.9	205.8	212.0	207.0	203.1	188.7	209.9	205.9	177.3
Providence, R. I.	239.4	221.0	189.5	229.2	215.3	185.1	236.4	222.0	183.2
Reading, Pa.	289.8	293.2	201.5	277.8	283.1	201.5	288.5	290.8	201.5
Rochester, N. Y.	238.6	224.6	186.0	233.0	219.8	186.0	240.8	224.9	186.0
Schenectady, N. Y.	224.0	217.1	208.2	210.2	205.7	208.2	219.0	213.4	208.2
Springfield, Mass.	211.6	199.7	135.6	195.7	191.5	130.7	198.8	194.6	134.5
Syracuse, N. Y.	235.5	234.0	[2]	230.4	229.6	[2]	237.4	234.0	[2]
Trenton, N. J.	231.7	198.7	154.9	221.2	191.6	152.3	229.3	198.7	152.3
Washington, D. C.	210.0	223.7	161.6	204.6	224.5	155.5	215.6	228.7	161.0
Wilmington, Del.	217.6	201.7	182.6	204.4	192.5	175.6	209.5	197.7	174.6
Middle Western District	208.9	202.7	177.9	203.8	198.0	163.5	208.5	203.0	172.5
Chicago, Ill.	284.8	274.7	171.3	273.2	266.3	148.5	284.0	275.4	167.5
Cincinnati, Ohio	261.4	240.6	165.0	257.2	240.6	144.0	257.2	240.6	147.6
Cleveland, Ohio	209.0	209.0	197.2	204.5	207.0	187.9	209.7	213.8	186.0
Columbus, Ohio	[2]	154.9	174.1	[2]	147.9	154.6	[2]	151.8	164.8
Dayton, Ohio	[2]	206.0	186.5	[2]	[2]	[2]	[2]	206.0	186.5
Detroit, Mich.	178.4	162.2	233.6	175.5	159.6	227.1	182.3	165.7	234.0
Duluth, Minn.	273.4	251.4	172.8	271.0	230.3	172.8	276.1	234.7	172.8
Grand Rapids, Mich.	197.5	184.3	151.8	191.6	178.8	140.1	198.9	187.1	153.3
Indianapolis, Ind.	119.8	156.7	151.1	116.2	153.3	140.6	119.7	156.9	158.9
Louisville, Ky.	[2]	229.2	195.1	[2]	223.2	171.6	[2]	223.2	185.1
Milwaukee, Wis.	210.8	179.9	152.5	202.0	173.8	140.9	206.4	176.6	148.3
Minneapolis, Minn.	203.3	194.2	188.8	203.3	194.9	186.9	206.9	197.6	186.9
Omaha, Neb.	[2]	225.4	[2]	[2]	225.4	[2]	[2]	225.4	[2]
St. Louis, Mo.	210.3	200.4	253.3	204.0	195.8	241.0	207.3	198.9	252.0
St. Paul, Minn.	198.1	188.6	175.5	195.8	188.0	173.0	198.9	190.6	180.4
Far Western District	177.4	[5]	152.7	174.2	[5]	149.9	[5]	[5]	154.2
Butte, Mont.	[2]	[2]	147.1	[2]	[2]	144.9	[2]	[2]	146.1
Denver, Colo.	169.4	[2]	197.8	169.7	[2]	204.7	[2]	[2]	217.2
Los Angeles, Cal.	176.2	[2]	124.8	172.9	[2]	122.9	[2]	[2]	129.9
Portland, Ore.	[2]	[2]	157.6	[2]	[2]	149.7	[2]	[2]	156.4
Salt Lake City, Utah	185.0	156.5	168.7	185.0	156.5	179.7	[2]	[2]	179.7
San Francisco, Cal.	155.7	151.3	141.4	146.8	142.7	133.1	152.7	148.4	141.5
Seattle, Wash.	[2]	[2]	158.2	[2]	[2]	[2]	[2]	[2]	[2]
Southern District	200.8	195.4	184.9	188.1	182.0	163.6	197.2	189.8	177.8
Atlanta, Ga.	207.4	208.2	157.2	207.4	208.2	146.5	207.4	208.2	171.4
Birmingham, Ala.	[2]	[2]	244.4	[2]	[2]	224.1	[2]	[2]	240.7
Charleston, S. C.	188.0	186.2	163.0	188.0	186.2	163.0	188.0	186.2	148.2
Dallas, Tex.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Jacksonville, Fla.	211.4	195.6	186.7	195.5	180.9	159.2	206.0	190.6	159.2
Little Rock, Ark.	[2]	[2]	166.8	[2]	[2]	[2]	[2]	[2]	[2]
Macon, Ga.	[2]	[2]	185.0	[2]	[2]	162.7	[2]	[2]	182.6
Memphis, Tenn.	[2]	226.9	172.7	[2]	210.0	126.6	[2]	221.3	156.1
New Orleans, La.	216.8	204.8	186.1	192.6	185.3	163.4	205.7	195.1	181.5
Richmond, Va.	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]

[1] Corrected figure.

[2] No report.

[3] Owing to the anthracite strike, indexes for stove and chestnut were not computed for November or December, 1925.

USE, IN SPECIFIED CITIES, ON SPECIFIED DATES, MARCH, 1929—(*Concluded*)

1914 = 100

March, 1929			July, 1929			November, 1929			December, 1929		
Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal
Stove	Chestnut		Stove	Chestnut		Stove	Chestnut		Stove	Chestnut	
211.7	202.3	167.9	204.7	195.4	159.2	210.5	202.7	167.3	210.7	203.0	167.9
225.8	206.9	172.3	217.8	198.9	167.4	224.0	204.8	169.7	224.3	205.1	170.2
[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]
284.5	232.6	108.8	252.4	206.5	103.9	257.9	210.2	105.5	257.9	210.2	108.8
[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]
252.1	227.1	173.1	245.1	217.1	170.0	250.9	222.0	170.5	250.9	222.0	170.5
156.6	149.5	172.3	148.1	141.3	172.3	155.8	148.8	172.3	155.8	148.8	172.3
217.7	190.1	183.3	209.7	182.7	183.3	216.9	189.8	187.9	216.9	189.8	187.9
278.9	279.1	164.3	267.6	263.6	164.3	278.5	274.6	195.1	278.5	274.6	195.1
222.4	228.3	211.0	216.3	220.2	212.7	222.4	227.1	214.5	222.4	227.1	214.5
202.9	219.3	179.9	202.9	219.3	172.2	209.1	226.2	191.3	209.1	226.2	191.3
225.8	226.1	[2]	219.2	221.5	[2]	225.8	228.4	[2]	225.8	228.4	[2]
177.9	172.4	209.3	169.7	164.3	209.3	177.9	172.4	209.3	177.9	172.4	209.3
185.1	178.3	183.6	177.0	173.1	178.8	182.4	177.7	183.7	182.4	177.7	183.7
176.3	158.0	[2]	171.9	153.9	[2]	175.7	158.0	[2]	175.7	158.0	[2]
185.8	191.7	227.1	174.2	179.7	216.5	181.2	186.9	218.7	181.2	186.9	218.7
225.9	218.4	172.0	218.4	211.8	157.0	222.9	215.7	157.6	224.9	217.6	164.2
224.6	215.7	203.2	215.5	206.0	197.0	220.7	211.0	197.0	221.9	211.0	197.0
[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]
221.4	195.6	147.7	216.0	190.6	144.9	223.4	197.4	144.9	223.4	197.4	144.9
[2]	128.2	144.0	[2]	125.9	139.3	[2]	132.8	147.1	[2]	132.8	147.1
209.9	205.9	181.5	203.9	198.9	176.2	208.4	204.8	182.9	208.4	204.8	182.9
236.4	220.9	181.2	229.9	216.1	166.4	237.1	222.9	166.4	237.1	222.9	167.5
[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]
240.8	224.9	186.0	230.6	213.1	186.0	240.9	222.9	186.0	240.9	222.9	186.0
219.0	213.4	208.2	212.2	206.5	208.2	219.0	213.4	208.2	219.0	213.4	208.2
204.8	200.4	134.5	194.8	190.6	132.0	201.1	196.8	133.9	202.3	198.0	133.9
237.4	234.0	[2]	230.8	227.3	[2]	236.5	233.1	[2]	236.5	233.1	[2]
231.4	198.7	152.3	221.0	188.8	152.3	231.4	198.0	152.3	231.4	198.0	152.3
215.6	228.7	161.0	210.8	223.4	160.1	217.0	230.2	163.9	217.0	230.2	163.9
210.3	198.4	174.6	207.2	191.8	174.6	214.1	198.4	174.6	214.1	198.4	174.6
208.7	203.2	172.5	203.8	198.4	162.5	208.1	202.4	172.0	208.1	202.5	172.7
284.0	275.4	167.5	277.3	268.7	153.4	287.8	279.0	172.6	287.8	279.0	172.6
261.3	240.6	147.6	261.3	240.6	151.9	261.3	240.6	162.9	261.3	240.6	164.3
209.7	213.8	181.4	201.8	207.8	169.2	203.1	210.5	186.6	202.5	210.5	186.6
[2]	151.8	162.7	[2]	151.4	145.9	[2]	153.2	159.2	[2]	153.2	159.7
[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]
182.3	165.7	235.6	176.6	160.4	232.9	181.2	164.6	237.5	179.7	163.3	241.0
276.5	234.7	172.8	273.1	231.7	168.1	278.2	235.4	171.8	278.2	235.4	171.8
198.9	187.1	153.3	194.8	183.3	138.6	198.9	187.1	158.1	198.9	187.1	158.1
119.7	156.9	152.6	116.2	153.4	139.4	117.9	155.9	155.1	117.9	155.9	156.4
[2]	229.1	198.6	[2]	223.2	171.5	[2]	223.2	185.1	[2]	229.1	198.6
206.4	176.6	148.3	202.8	173.3	138.6	205.8	175.5	143.8	205.8	175.5	143.8
207.3	197.6	186.9	204.0	193.9	174.9	207.8	197.3	181.9	207.8	197.3	181.9
[2]	225.4	[2]	[2]	225.4	[2]	[2]	225.4	[2]	[2]	225.4	[2]
210.6	202.1	262.3	203.5	195.9	247.5	206.4	198.7	278.0	206.4	198.7	278.0
199.3	190.6	180.4	196.4	187.4	176.3	199.6	190.1	180.6	199.6	190.1	180.6
[5]	[5]	152.6	[5]	[2]	146.8	[5]	[2]	153.8	[5]	[2]	154.6
[2]	[2]	146.1	[2]	[2]	147.9	[2]	[2]	149.0	[2]	[2]	149.0
[2]	[2]	216.0	[2]	[2]	193.4	[2]	[2]	208.3	[2]	[2]	211.6
[2]	[2]	129.1	[2]	[2]	118.7	[2]	[2]	126.7	[2]	[2]	126.7
[2]	[2]	154.2	[2]	[2]	150.2	[2]	[2]	159.8	[2]	[2]	159.8
[2]	[2]	171.7	[2]	[2]	166.3	[2]	[2]	177.2	[2]	[2]	188.0
152.7	[2]	141.5	146.8	[2]	133.2	152.7	[2]	141.5	152.7	[2]	141.5
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
199.5	192.8	181.0	189.4	183.0	165.1	196.0	189.7	182.2	196.6	190.3	182.4
207.4	208.2	177.0	207.4	208.2	166.8	207.4	208.2	176.9	207.4	208.2	176.9
[2]	[2]	238.4	[2]	[2]	214.1	[2]	[2]	243.6	[2]	[2]	245.6
188.0	186.2	148.2	188.0	186.2	148.2	188.0	186.2	148.2	188.0	186.2	148.2
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
211.4	195.6	159.2	201.3	186.3	149.8	205.3	189.9	182.4	213.3	197.3	182.4
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
[2]	[2]	183.4	[2]	[2]	165.5	[2]	[2]	186.0	[2]	[2]	186.0
[2]	221.3	156.1	[2]	221.3	152.2	[2]	221.3	152.2	[2]	221.3	152.2
210.6	201.1	187.2	186.8	176.0	152.3	203.5	194.6	166.3	203.5	194.6	166.3
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]

[4] City no longer included in study.
[5] Insufficient number of reports from cities included in group to warrant index for district as a whole.

However, it must be kept in mind that in some regions only bituminous coal is used while in others anthracite is most commonly used. Proximity to mining districts, too, exerts its influence on prices. In Table 16 are presented indexes of coal prices in the cities covered by the study, arranged according to geographic location.

In general, prices of bituminous coal have risen highest in the East and least in the Far West. An examination of the monthly index numbers of these prices for the four geographic regions given in Table 16 reveals that without exception the Far West showed the lowest index each month. The other regions were not quite as consistent in their relative positions, but the East has most frequently shown the highest index. The Middle West and South have varied in position, but taking the entire period as a whole little difference between the two indexes is noticeable; if any distinction is made, it might be said that prices in the South have risen slightly higher than in the Middle West. Anthracite prices have in nearly all months been highest in the East, and again without exception least in the Far West. The Middle West and the South shifted their relative positions at times. For the entire period as a whole, however, anthracite prices in the Middle West have been somewhat higher as compared with their 1914 level than they have in the South.

It is interesting to note the range of the index numbers noted for the cities within each geographic region for the months of November, 1920, July, 1922, and December, 1929. These are presented in Table 17. In November, 1920, the indexes for bituminous coal ranged from 158 to 387 in the United States as a whole; in July, 1922, from 117 to 236; and in December, 1929, from 109 to 278. The indexes for stove anthracite ranged from 151 to 288 in November, 1920; from 143 to 227 in July, 1922; and from 118 to 288 in December, 1929. Those for the chestnut variety ranged from 139 to 280, 134 to 222, and 133 to 279, respectively, on the three different dates. It should be noted, however, that in December, 1929 practically no quotations for anthracite were received from the Far West, because very little of this kind of coal is used in that region.

Comparing the ranges of these indexes, i. e., the ranges of the relative increases in the various cities over July, 1914

CHART 5: INDEXES OF RETAIL PRICES OF COAL, MARCH, 1919 TO DECEMBER, 1929

Base, July, 1914 = 100

(Source: National Industrial Conference Board)

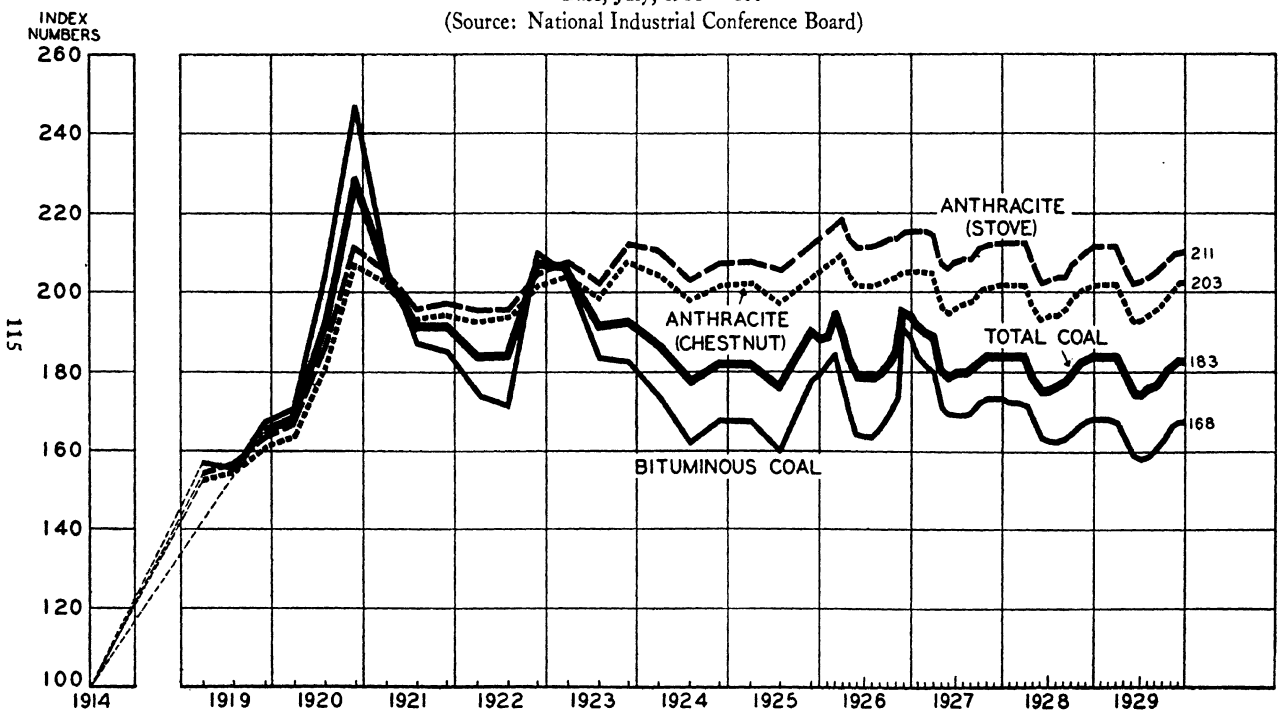


TABLE 17: HIGHEST AND LOWEST INDEXES IN EACH GEOGRAPHIC DIVISION FOR THREE TYPES OF COAL, ON SPECIFIED DATES

(Source: National Industrial Conference Board)

District	November, 1920		July, 1922		December, 1929	
	High	Low	High	Low	High	Low
Bituminous						
Eastern	387.1	200.0	236.1	144.4	218.7	108.8
Middle Western	302.0	200.0	210.8	151.3	278.0	143.8
Far Western	216.1	158.3	172.0	116.7	211.6	126.7
Southern	326.9	196.3	200.0	152.0	245.6	148.2
Stove Anthracite						
Eastern	287.8	185.5	227.0	184.6	278.5	155.8
Middle Western	222.3	200.0	206.4	174.4	287.8	117.9
Far Western	195.6	151.4	172.2	142.9	[1]	[1]
Southern	230.3	180.0	212.1	165.0	213.3	188.0
Chestnut Anthracite						
Eastern	280.3	185.5	222.2	180.1	274.6	132.8
Middle Western	222.2	193.8	205.9	180.0	279.0	153.2
Far Western	220.0	138.9	196.0	134.3	[1]	[1]
Southern	225.5	180.0	207.3	166.7	221.3	186.2

[1] Index dropped because very little anthracite is used in this region.

for the three kinds of coal, it is found that on all three dates the greatest percentage difference was noted in bituminous coal. The smallest range was in stove anthracite on the earlier dates and in chestnut anthracite on the later date. Comparing the range of indexes in point of time, the greatest spread between the highest and lowest indexes for any of the three kinds of coal was in December, 1929, and the smallest in July, 1922.

Gas and Electricity

Neither gas nor electricity rates are subject to frequent fluctuations. Changes in their costs, therefore, are ascertained only twice a year.[1] The peak in the cost of gas and electricity combined occurred in July, 1921, when it was 55% above July, 1914. Remaining at this level for about a year, it declined in 1926 to 18% above the July, 1914 level. Since then there has been a further rise to 22% above the 1914

[1] Only one investigation was made in 1929, namely, in January. In January, 1930, however, rates were also requested for July, 1929.

level in 1927 and the first half of 1928, and a further recession to 20% in 1929. The increase over July, 1914 in the cost of gas and electricity as a whole, therefore, is considerably less than that of any other major group of household expenditures.

Changes in the cost of gas and electricity separately for the United States as a whole are available since July, 1926. On that date the cost of gas was 38% above July, 1914. It increased to 41% during the period of June, 1927 to January, 1928 and receded again to 39% in January, 1929.

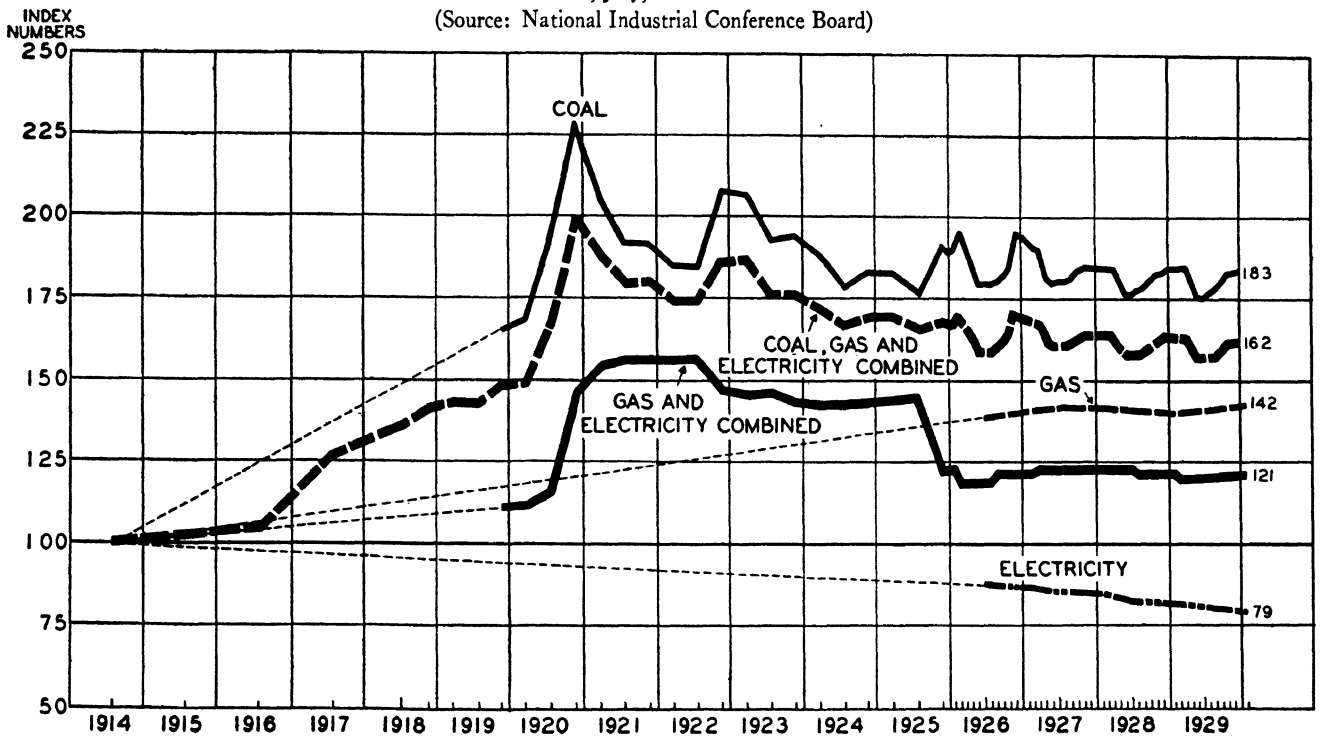
A few words of explanation should be given as to the two types of gas used. The index of gas costs refers not only to manufactured gas but also to natural gas wherever the latter is used. The cost of natural gas, however, has increased to a much greater extent than that of manufactured gas. This does not mean that the gas bill of the consumer using natural gas is higher than that of the consumer using manufactured gas. On the contrary, the money cost of natural gas is generally lower than that of manufactured gas for the same amount of heating value. The rise in the cost of natural gas as compared with 1914, however, is relatively much greater than that of manufactured gas. This may be partly explained by the fact that the cost of such gas in 1914 was comparatively very low. The effects of these increases in natural gas costs, of course, are felt in the total index of gas. It should also be pointed out that some cities changed from manufactured gas to natural gas, and an index showing changes in the cost of these two types of gas will generally indicate a decided drop. If only cities in which manufactured gas is used were included, the index would be somewhat lower. But, inasmuch as many cities use natural gas, an index purporting to show changes in the cost of fuel and light must reflect changes in the cost of both types of gas. According to figures published by the American Gas Association,[1] 28% of all gas customers used natural gas in 1929. The population of all cities included in the gas study of the Conference Board index is thirty-three millions, while the population of the cities using natural gas covered by the index is seven millions. Hence, 21% of the population covered by

[1] *New England Utility News*, Feb. 3, 1930.

CHART 6: INDEXES OF RETAIL PRICES OF FUEL AND LIGHT, JULY, 1914 TO DECEMBER, 1929

Base, July, 1914 = 100

(Source: National Industrial Conference Board)



the index uses natural gas. This would indicate that the proportion of cities with natural gas included in the index is fairly representative of conditions in the United States as a whole.

Table 18 gives index numbers for each one of the cities included in the survey, except those that were added in 1929. A fairly wide range of cost changes is noted in these cities. Looking over the figures for January, 1929, the largest increase is found to be 340%. There were a few cities in which no changes took place in the cost of gas and a few others in which a decline was recorded, the largest decline amounting to 60% from the July, 1914 level. Both the largest increase and the largest decrease were in cities where natural gas is now used. The large decline was due to the fact that in that city manufactured gas was used in 1914 and natural gas on the later date. All but one[1] of the increases above 100% were in cities using natural gas. The range of the index numbers in cities where natural gas is now used (i. e., in cities which have supplied such gas consistently since 1914 or have formerly supplied manufactured gas) was from 40 to 440; in cities where manufactured gas has been used consistently since 1914, the range was from 84 to 200.[2]

No separate indexes are available on a 1914 base for the forty-two cities added in 1929;[3] rates in these cities can be compared only with 1928. In forty of these cities the rates were still the same in January, 1929 as they were in June, 1928; in two cities decreases were noted. The cities follow:

Per Cent Decrease between June, 1928 and January, 1929	No Change between June, 1928 and January, 1929		
Muskogee, Okla.... 16.67	Beaumont, Tex.	Kalamazoo, Mich.	Sioux Falls, S. D.
Madison, Wis..... 2.33	Bellingham, Wash.	Lewiston, Me.	Stamford, Conn.
	Butte, Mont.	Lexington, Ky.	Superior, Wis.
	Charleston, W. Va.	Malden, Mass.	Taunton, Mass.
	Columbia, S. C.	Meriden, Conn.	Warren, Ohio
	Columbus, Ga.	Montgomery, Ala.	Waterloo, Ia.
	Council Bluffs, Ia.	Muncie, Ind.	Watertown, N. Y.
	Danville, Ill.	Perth Amboy, N. J.	Wichita Falls, Tex.
	Dubuque, Ia.	Phoenix, Ariz.	Williamsport, Pa.
	Fitchburg, Mass.	Pittsfield, Mass.	Wilmington, N. C.
	Fresno, Cal.	Quincy, Ill.	Winston-Salem, N. C.
	Hamilton, Ohio	San Jose, Cal.	Woonsocket, R. I.
	Jackson, Mich.	Shreveport, La.	York, Pa.
	Jamestown, N. Y.		

[1] The one exception was in a city supplying gas obtained as a by-product.

[2] One city had an index of 250, but this is not strictly comparable with the others. See footnote 1.

[3] See pp. 55–56 for description of method used in computation of total gas index.

TABLE 18: INDEXES OF THE COST OF GAS AND ELECTRICITY FOR HOUSEHOLD USE, IN SPECIFIED CITIES, ON SPECIFIED DATES, NOVEMBER, 1925 TO JANUARY, 1929

Base, July, 1914 = 100

(Source: National Industrial Conference Board)

City	Gas							Electricity						
	Nov., 1925	June, 1926	Jan., 1927	June, 1927	Jan., 1928	June, 1928	Jan., 1929	Nov., 1925	June, 1926	Jan., 1927	June, 1927	Jan., 1928	June, 1928	Jan., 1929
Akron, Ohio[1]	136	150	283	283	283	283	283	84	84	91	91	91	91	91
Albany, N. Y.	120	120	120	120	120	120	[2]	100	100	100	100	100	100	[2]
Allentown, Pa.	130	130	130	130	130	130	130	101	101	101	101	101	101	91
Altoona, Pa.	182	182	182	182	150	150	150	90	100	100	100	114	114	114
Atlanta, Ga.	155	155	155	155	155	155	165	116	116	116	116	116	116	143
Atlantic City, N. J.	167	167	167	167	167	167	[2]	102	92	92	92	88	88	[2]
Augusta, Ga.	161	161	161	161	161	161	161	83	83	83	83	83	83	92
Baltimore, Md.	106	106	106	106	106	106	106	94	94	82	82	82	82	82
Bayonne, N. J.	133	133	133	133	133	133	133	90	90	90	90	90	90	90
Berkeley, Cal.	106	106	106	106	106	104	[2]	107	107	107	107	107	100	[2]
Bethlehem, Pa.	130	130	130	130	130	130	[2]	101	101	101	101	101	101	[2]
Binghamton, N. Y.	96	96	96	96	96	96	109	111	111	111	111	111	67	67
Birmingham, Ala.	84	84	84	84	84	84	84	85	85	85	85	85	85	85
Boston, Mass.	150	150	150	150	150	150	150	85	85	85	85	85	85	81
Bridgeport, Conn.	151	145	145	145	145	145	145	81	81	81	81	75	75	69
Brockton, Mass.	150	150	150	150	150	146	146	67	67	67	67	67	67	67
Buffalo, N. Y.[3]	60	65	65	65	65	65	65	73	77	77	77	77	73	73
Cambridge, Mass.	144	144	144	144	144	144	144	80	80	80	80	80	80	55
Camden, N. J.	133	133	133	133	133	133	133	90	90	90	90	90	90	90
Canton, Ohio[1]	185	185	283	283	283	283	283	94	94	94	94	94	94	94
Charleston, S. C.	141	141	141	141	141	141	141	100	100	100	100	100	100	100
Chattanooga, Tenn.	158	158	158	158	158	158	158	100	100	90	90	90	90	90
Chester, Pa.	170	170	170	170	170	132	132	80	82	82	82	82	82	76
Chicago, Ill.	133	133	133	133	133	128	128	80	90	90	90	80	62	62
Cincinnati, Ohio[1]	214	214	214	214	214	214	214	90	90	90	90	82	82	82

Cleveland, Ohio[1]	233	250	250	250	250	250	250	50	50	50	50	50	50	50
Columbus, Ohio[1]	183	183	183	160	160	160	160	100	100	100	100	100	100	100
Covington, Ky.[1]	150	[4]	150	250	250	250	250	100	[4]	100	100	100	100	100
Dallas, Tex.[1]	187	187	214	214	214	214	214	67	67	67	67	67	67	67
Davenport, Ia.	130	[4]	144	144	144	144	144	90	90	90	90	90	78	78
Dayton, Ohio[1]	167	167	233	233	233	233	233	94	94	94	94	94	94	94
Denver, Col.	119	119	119	113	113	113	113[5]	100	100	100	84	84	84	84
Des Moines, Ia.	128	128	128	[4]	128	128	128	81	100	100	[4]	84	84	76
Detroit, Mich.	100	100	100	100	100	100	100	102	88	88	88	88	70	70
Duluth, Minn.	100	100	100	100	100	100	100	75	75	75	75	75	75	75
East Orange, N. J.	133	133	133	133	133	133	[2]	90	90	90	90	90	90	[2]
East St. Louis, Ill.	130	130	130	130	130	130	130	100	100	100	100	100	100	103
Elizabeth, N. J.	133	133	133	133	133	133	[2]	90	90	90	90	90	90	[2]
El Paso, Tex.	115	[4]	[4]	[4]	115	115	115	81	81	81	81	81	81	81
Erie, Pa.	250	250	250	250	250	250	250	100	95	95	95	95	95	95
Evansville, Ind.	142	142	142	142	142	142	142	100	100	100	100	100	100	100
Fall River, Mass.	144	144	144	144	144	144	144	95	89	89	89	84	84	84
Flint, Mich.	130	125	125	125	125	125	125	100	100	100	100	100	89	89
Fort Wayne, Ind.	153	153	153	153	153	153	153	71	63	63	63	63	63	63
Fort Worth, Tex.[1]	150	150	150	150	150	150	150	80	65	65	65	65	65	65
Gary, Ind.	100	100	100	100	100	100	100	89	89	89	89	89	89	89
Grand Rapids, Mich.	111	111	111	111	111	110	110	100	100	100	100	100	101	101
Harrisburg, Pa.	111	100	115	115	115	115	115	100	100	100	100	100	100	100
Hartford, Conn.	139	139	139	139	139	139	139	105	105	99	99	99	99	99
Haverhill, Mass.	147	147	147	147	147	147	147	92	92	89	89	89	89	89
Hoboken, N. J.	133	133	133	133	133	133	[2]	90	90	90	90	90	90	[2]
Holyoke, Mass.	125	125	125	125	125	125	125	83	83	83	83	75	75	75
Houston, Tex.	105	58[6]	58[6]	58[6]	58[6]	58[6]	58	69	84	71	71	71	71	71
Huntington, W. Va.[1]	125	125	125	167	167	167	167	100	100	100	100	133	133	133
Indianapolis, Ind.	209	191	191	173	173	173	173	104	90	90	87	87	87	87

[1] Natural gas. [2] City no longer in study. [3] Mixed gas represented in figures given in table, but manufactured gas in 1914.
[4] No report. [5] Changed to natural gas. [6] Changed to natural gas—figure revised, based on additional information.

TABLE 18: INDEXES OF THE COST OF GAS AND ELECTRICITY FOR HOUSEHOLD USE, IN SPECIFIED CITIES, ON SPECIFIED DATES, NOVEMBER, 1925 TO JANUARY, 1929—(*Continued*)

Base, July, 1914 = 100

City	Gas							Electricity						
	Nov., 1925	June, 1926	Jan., 1927	June, 1927	Jan., 1928	June, 1928	Jan., 1929	Nov., 1925	June, 1926	Jan., 1927	June, 1927	Jan., 1928	June, 1928	Jan., 1929
Jacksonville, Fla.	180	177	177	177	177	177	177	[4]	[4]	[4]	[4]	100	100	100
Jersey City, N. J.	133	133	133	133	133	133	[2]	90	90	90	90	90	90	[2]
Johnstown, Pa.[1]	317	317	317	317	317	317	317	100	100	100	100	100	100	100
Kansas City, Kan.[1]	[4]	[4]	[4]	[4]	440	440	440	109	100	100	100	100	100	100
Kansas City, Mo.	137	137	166	166	166	137	137	92	97	76	76	76	71	71
Knoxville, Tenn.	[4]	183	183	183	183	183	183	124	124	124	124	125	125	125
Lancaster, Pa.	132	132	132	132	132	132	132	100	100	100	100	100	100	100
Lansing, Mich.	156	156	156	156	156	156	156	75	75	75	75	75	75	62
Lawrence, Mass.	150	150	150	150	150	150	150	85	81	77	77	77	77	77
Lincoln, Neb.	103	102	103	104	100	100	99	68	56	56	56	56	56	56
Little Rock, Ark.[1]	200	200	200	200	200	200	200	100	100	100	100	100	100	100
Long Beach, Cal.	50	59	59	59	53	87	[2]	93	93	93	80	80	80	[2]
Los Angeles, Cal.[1]	100	100	100	100	135	135	149	102	102	102	102	91	91	91
Louisville, Ky.[1]	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Lowell, Mass.	162	162	157	157	95	95	95	83	83	83	83	83	83	88
Lynn, Mass.	160	160	160	160	160	160	160	90	90	90	90	80	80	80
Macon, Ga.	132	132	132	132	132	132	132	100	100	100	100	100	100	111
Manchester, N. H.	143	143	143	130	130	128	128	105	105	105	105	105	96	87
Memphis, Tenn.	120[7]	120	120	120	120	120	73[5]	80	80	80	80	80	80	80
Milwaukee, Wis.	113	113	113	113	113	113	113	88	88	77	77	77	77	77
Minneapolis, Minn.	116	121	116	120	118	118	112	111	111	111	111	111	111	100
Mobile, Ala.	180	164	164	176	176	176	176	129	129	129	129	129	129	111
Nashville, Tenn.	178	178	178	178	178	178	178	100	91	91	91	91	91	91
Newark, N. J.	133	133	133	133	133	133	133	90	90	90	90	90	90	90
New Bedford, Mass.	140	150	150	150	150	150	150	69	65	65	62	63	63	63

New Britain, Conn.	150	150	[4]	[4]	150	150	150	150	85	85	90	85	85	85
New Haven, Conn.	136	133	133	133	133	133	133	81	81	81	81	75	75	69
New Orleans, La.	130	130	130	130	130	130	58[5]	92	92	92	92	92	92	92
New York, N. Y.	140	140	140	146	144	144	143	75	69	74	72	75	74	71
Niagara Falls, N. Y.	135	135	135	97	97	97	97	100	100	100	100	100	90	90
Norfolk, Va.	140	135	135	135	135	135	135	100	100	100	94	94	94	94
Oakland, Cal.	106	106	106	106	106	104	[2]	107	107	107	107	107	100	[2]
Oklahoma City, Okla.[1]	252	260	260	260	240	240	228	86	82	82	82	86	86	86
Omaha, Neb.	98	98	98	98	91	91	91	65	53	53	53	53	53	53
Passaic, N. J.	133	133	133	133	133	133	[2]	90	90	90	90	90	90	[2]
Paterson, N. J.	133	133	133	133	133	133	133	90	90	90	90	90	90	90
Pawtucket, R. I.	138	138	138	138	138	138	138	100	100	100	100	100	100	100
Peoria, Ill.	120	120	120	120	120	120	120	87	87	87	87	87	75	75
Philadelphia, Pa.	100	100	100	100	100	100	100	67	67	67	67	67	67	67
Pittsburgh, Pa.[1]	218	229	229	229	218	218	218	73	80	80	80	80	80	80
Portland, Me.	155	150	150	150	150	150	150	94	100	100	100	100	100	100
Portland, Ore.	129	129	129	131	131	131	131	142	142	142	142	142	142	142
Portsmouth, Va.	150	150	150	150	150	150	150	100	100	100	94	94	94	94
Providence, R. I.	147	147	147	147	147	147	147	93	93	95	93	90	90	90
Racine, Wis.	125	125	125	125	125	125	125	92	100	84	84	84	84	84
Reading, Pa.	135	135	135	135	135	135	135	88	88	88	79	79	79	79
Richmond, Va.	144	144	144	144	144	144	144	100	100	100	94	94	94	94
Roanoke, Va.	125	125	125	125	125	125	125	100	100	100	100	100	100	100
Rochester, N. Y.	105	105	105	105	105	105	105	100	100	100	100	100	100	100
Rockford, Ill.	147	147	147	147	147	147	147	83	83	83	83	83	83	83
Sacramento, Cal.	123	123	123	123	122	121	121	100	114	114	114	114	107	107
Saginaw, Mich.	139	139	139	139	139	139	139	100	100	100	100	100	89	89
St. Joseph, Mo.	165	165	165	165	165	165	80[5]	104	104	70	70	70	70	70
St. Louis, Mo.	125	125	125	125	125	125	125	67	67	67	67	67	67	67
St. Paul, Minn.	85	106	106	106	106	106	106	100	90	90	90	90	90	83

[1] Natural gas. [2] City no longer in study. [3] Mixed gas represented in figures given in table, but manufactured gas in 1914.
[4] No report. [5] Changed to natural gas.
[6] Changed to natural gas—figure revised, based on additional information. [7] Revised figure based on additional information.

TABLE 18: INDEXES OF THE COST OF GAS AND ELECTRICITY FOR HOUSEHOLD USE, IN SPECIFIED CITIES, ON SPECIFIED DATES, NOVEMBER, 1925 TO JANUARY, 1929—(*Concluded*)

Base, July, 1914 = 100

City	Gas							Electricity						
	Nov., 1925	June, 1926	Jan., 1927	June, 1927	Jan., 1928	June, 1928	Jan., 1929	Nov., 1925	June, 1926	Jan., 1927	June, 1927	Jan., 1928	June, 1928	Jan., 1929
Salt Lake City, Utah	180[7]	180[7]	180[7]	180[7]	180	180[7]	180	90	90	90	90	90	90	85
San Antonio, Tex.	42[6]	40[6]	40[6]	40[6]	40[6]	40[6]	40	71	71	71	71	57	57	57
San Diego, Cal.	80	80	121	121	120	120	120	101	114	114	114	107	99	99
San Francisco, Cal.	112	112	112	112	112	111	111	107	107	107	107	107	100	100
Savannah, Ga.	116	116	116	116	116	116	116	150	150	111	111	111	111	111
Schenectady, N. Y.	85	87	87	87	87	85	85	100	100	100	100	100	131	124
Scranton, Pa.	158[7]	158	161	161	161	161	161	111	111	111	111	111	111	100
Seattle, Wash.	200	150	150	200	200	200	200	92	92	92	92	92	92	92
Sioux City, Ia.	125	125	125	125	125	125	125	75	78	78	78	78	78	78
Somerville, Mass.	147	147	147	147	147	147	147	85	85	85	85	85	85	81
South Bend, Ind.	122	122	122	122	122	122	122	80	80	80	80	80	80	80
Spokane, Wash.	144	144	144	146	146	146	146	100	69	69	69	69	69	69
Springfield, Ill.	135	125	125	125	125	125	125	65	65	65	65	65	65	65
Springfield, Mass.	159	159	159	159	176	159	159	71	67	67	58	58	50	46
Springfield, Ohio[1]	200	200	200	200	200	200	200	114	100	100	100	100	100	100
Syracuse, N. Y.	119	119	119	119	119	119	119	94	94	94	94	94	94	94
Tacoma, Wash.	148	148	148	148	148	148	148	100	100	100	[4]	90	90	90
Tampa, Fla.	123	123	123	123	123	123	123	93	93	93	93	93	93	93
Terre Haute, Ind.	122	129	129	[4]	129	129	129	78	[4]	78	[4]	78	78	78
Toledo, Ohio	100	79[6]	79[6]	79[6]	79[6]	79[6]	79	100	100	100	100	100	100	100
Topeka, Kan.	97[6]	97[6]	97[6]	97[6]	97[6]	97[6]	97	100	74	74	74	74	74	69
Trenton, N. J.	133	133	133	133	133	133	133	90	90	90	90	90	90	90
Troy, N. Y.	130	130	130	125	125	125	[2]	89	89	89	89	89	89	[2]
Tulsa, Okla.[1]	333[7]	317	317	317	317	317	317	81	81	81	81	80	80	80
Utica, N. Y.	123	123	123	123	124	124	124	85	85	85	85	85	85	85

Washington, D. C.	111	118	118	118	118	118	118	75	72	67	67	64	64	56
Waterbury, Conn.	136	[4]	[4]	[4]	136	136	138	150	85	85	85	85	85	85
Wheeling, W. Va.[1]	200	200	200	200	200	200	200	100	100	100	118	118	118	111
Wichita, Kan.[1]	318[7]	318	318	[4]	[4]	[4]	417	100	68	68	68	68	68	68
Wilkes-Barre, Pa.	145	145	145	145	145	145	145	100	100	100	100	100	100	100
Wilmington, Del.	137	137	137	137	137	137	137	95	95	95	95	95	90	90
Worcester, Mass.	203	203	203	203	197	197	197	78	78	78	78	78	78	78
Yonkers, N. Y.	150	150	150	150	150	150	[2]	92	85	85	85	85	85	[2]
Youngstown, Ohio[1]	[4]	117	283	283	283	283	283	95	96	96	96	96	96	96
United States	..	138	140	141	141	140	139	..	87	86	85	84	82	81

[1] Natural gas. [2] City no longer in study. [3] Mixed gas represented in figures given in table, but manufactured gas in 1914.
[4] No report. [5] Changed to natural gas. [6] Changed to natural gas—figure revised, based on additional information.
[7] Revised figure based on additional information.

The cost of electricity in the country as a whole has been steadily declining since the end of 1925, although not to any marked degree. In June, 1926, the earliest date for which an electricity index for the United States is available, the index was 87; in January, 1929 it was 81, a decline of 6.9% between the two dates. Compared with July, 1914, therefore, the cost of electricity in January, 1929 showed a decrease of 19%. This situation, of course, is not true of all cities. In some cities no change has occurred since 1925, in others no change since 1914. Again, in some cities increases have taken place either before or after 1925, or in both periods. The highest increase during the period of November, 1925 to January, 1929 has been 50% over the July, 1914 level and the lowest increase 1%. The decreases range from 1% to 54% below July, 1914.

The remarks made above in regard to separate gas indexes for the cities added in 1929 apply here. No change in electricity rates was noted in thirty-three cities, while decreases were found in nine cities. These cities follow:

Per Cent Decrease between June, 1928 and January, 1929		No change between June, 1928 and January, 1929		
Madison, Wis.....	15.19	Beaumont, Tex.	Hamilton, Ohio	Shreveport, La.
Montgomery, Ala..	13.89	Bellingham, Wash.	Jackson, Mich.	Sioux Falls, S. D.
Quincy, Ill.....	11.11	Butte, Mont.	Jamestown, N. Y.	Stamford, Conn.
Taunton, Mass....	10.00	Charleston, W. Va.	Kalamazoo, Mich.	Superior, Wis.
Wichita Falls, Tex..	8.33	Columbia, S. C.	Lewiston, Me.	Warren, Ohio
Muskogee, Okla....	5.26	Columbus, Ga.	Meriden, Conn.	Waterloo, Ia.
Malden, Mass.....	5.05	Council Bluffs, Ia.	Muncie, Ind.	Watertown, N. Y.
Pittsfield, Mass....	2.90	Danville, Ill.	Perth Amboy, N. J.	Wilmington, N. C.
Lexington, Ky.....	1.31	Dubuque, Ia.	Phoenix, Ariz.	Winston-Salem, N. C.
		Fitchburg, Mass.	Pueblo, Colo.	Woonsocket, R. I.
		Fresno, Cal.	San Jose, Cal.	York, Pa.

Seasonal Variations

Seasonal fluctuations in the fuel and light index are rather marked, as may be seen from the seasonal indexes computed for this group on page 140 and from the accompanying chart. These fluctuations, however, are due entirely to changes in coal prices, since gas and electricity rates do not fluctuate according to the seasons. The index of fuel and light as a whole may be expected to be below the yearly average from April through September and above it during the remaining months. The rise in the index generally occurs between July and January and the drop between February and May.

SUNDRIES

The miscellaneous group of expenditures entitled "sundries" occupies a relatively important part in a wage earner's family budget, amounting to about one-fifth of the total expenditure. The difficulties in measuring exactly changes in the cost of some of these items, especially those which are services rather than commodities, have already been mentioned. Changes in the cost of some of the items have to be determined by estimate rather than detailed inquiry such as is undertaken to determine changes in the prices of most of the items included in the cost of living survey. This was particularly true before the latter part of 1925. It must be emphasized again, however, that not one of these items alone plays a very large part in the total cost of living and therefore any possible error in estimating would not appreciably affect the index of the cost of living as a whole.

Because of the method of determining changes in the cost of the various groups composing "sundries," it will be possible to trace the development of only a few of these, namely, carfare, reading matter, drugs, household furnishings, tobacco and candy. Index numbers for these and other items are shown in Table 19.

Of all of these miscellaneous groups the highest increase was noted for household furnishings. In 1920, prices for this group were 125% above the July, 1914 level; in July, 1922 they dropped to 67% above 1914 and since then have advanced again to 80% above the 1914 level in December, 1929. Reading material reached its high point in 1920, when it was 92% above July, 1914 and remained at this level for a time, later decreasing gradually, until it was 78% above July, 1914 in December, 1929.

Candy showed its greatest advance in price in July, 1920, when it was 90% over the July, 1914 level; by November, 1921 it had dropped to 50%, and since then it has increased to 70% over the 1914 level in December, 1929. Drugs did not reach their high point until November, 1925 when they were 87% higher than in July, 1914. Since then they have receded to 57% over July, 1914 in December, 1929. Tobacco prices were highest in March, 1920, when they were 75%

TABLE 19: INDEXES OF THE AVERAGE COST OF ITEMIZED SUNDRIES, ON SPECIFIED DATES, MARCH, 1920 TO DECEMBER, 1929

Base, July, 1914 = 100

(Source: National Industrial Conference Board)

Date	Carfare	Medical Care		Reading	Recreation	Insurance	Household Furnishings	Church and Charity	Dues	Tobacco	Candy	All Sundries
		Doctors	Drugs									
1914—July	100	100	100	100	100	100	100	100	100	100	100	100
1920—March	140	166	160	192	211	184	225	174	143	175	180	183
July	140	169	160	192	213	196	225	174	143	175	190	185
November	148	194	167	192	213	206	225	192	143	175	190	192
1921—March	148	197	153	192	213	196	192	192	143	175	170	185
July	156	200	153	192	213	192	192	190	143	175	170	185
November	160	200	133	192	211	176	192	170	143	155	150	178
1922—March	160	200	133	192	211	170	175	170	143	145	150	174
July	160	200	133	192	211	170	167	170	143	145	150	172
November	148	200	140	183	211	170	175	170	143	135	160	171
1923—March	148	200	147	183	211	170	183	170	143	135	170	173
July	148	200	147	183	211	170	183	170	143	135	170	173
November	148	200	167	183	211	170	183	170	143	135	170	174
1924—March	148	200	167	183	211	170	187	170	143	135	170	174
July	148	200	167	183	207	170	183	170	143	135	170	173
November	152	200	180	183	207	170	188	170	143	135	170	175
1925—March	152	200	180	183	207	170	188	170	143	135	170	175
July	152	200	180	183	209	170	187	170	143	135	170	175
November	142[1]	200	187	183	209	173	187	173	143	135	170	175
December	142	200	187	183	209	176	188	176	143	135	170	176
1926—January	143	200	187	183	209	176	188	176	143	135	170	176
February	143	200	184	183	209	175	187	175	143	135	170	175
March	143	200	184	183	209	174	187	174	143	132	170	175
April	143	200	184	182	209	173	187	173	143	131	170	174
May	143	200	184	182	209	173	186	173	143	131	170	174
June	143	200	184	182	209	172	185	172	143	131	170	174
July	143	200	184	181	209	172	184	172	143	131	170	174
August	143	200	184	181	209	170	183	170	143	132	170	173
September	143	200	184	181	209	169	183	169	143	132	170	173
October	145	200	184	182	209	171	183	171	143	132	170	174
November	145	200	184	182	209	171	182	171	143	132	170	173
December	145	200	184	182	209	172	182	172	143	132	170	174

1927—January	145	200	184	182	209	173	181	173	143	135	170	174
February	145	200	184	182	209	171	181	171	143	135	170	174
March	145	200	184	182	209	169	182	169	143	135	170	173
April	145	200	184	182	209	168	181	168	143	135	170	173
May	145	200	174	182	209	168	182	168	143	135	170	173
June	146	200	169	182	209	168	181	168	143	135	170	172
July	147	200	169	182	209	169	181	169	143	135	170	173
August	147	200	169	182	209	166	181	166	143	135	170	172
September	147	200	169	182	209	166	182	166	143	135	170	172
October	147	200	169	182	209	167	183	167	143	135	170	174
November	147	200	169	182	209	168	183	168	143	135	170	173
December	147	200	169	182	209	168	183	168	143	135	170	174
1928—January	147	200	169	181	209	168	182	168	143	135	170	172
February	148	200	169	181	209	167	182	167	143	135	170	172
March	148	200	169	176	209	166	183	166	143	135	170	171
April	148	200	169	176	209	165	183	165	143	135	170	171
May	147	200	169	176	209	165	182	165	143	135	170	171
June	148	200	169	176	209	166	183	166	143	135	170	171
July	149	200	169	176	209	165	183	165	143	135	170	171
August	149	200	169	176	209	165	182	165	143	135	170	171
September	149	200	169	176	209	165	182	165	143	135	170	171
October	150	200	168	174	209	167	182	167	143	135	170	171
November	150	200	168	174	209	167	181	167	143	135	170	171
December	151	200	168	174	209	167	181	167	143	135	170	171
1929—January	150.9	200.0	168.0	175.5	209.0	160.9	180.6	160.9	143.0	135.0	170.0	170.0
February	150.9	200.0	167.4	175.5	209.0	161.0	181.0	161.0	143.0	135.0	170.0	170.1
March	150.9	200.0	166.0	175.5	209.0	159.8	180.8	159.8	143.0	135.0	170.0	169.7
April	150.9	200.0	161.8	175.5	209.0	159.3	180.8	159.3	143.0	135.0	170.0	169.5
May	151.0	200.0	162.8	175.5	209.0	159.4	180.6	159.4	143.0	120.7	170.0	168.1
June	151.1	200.0	158.3	177.7	209.0	160.1	179.5	160.1	143.0	120.7	170.0	168.3
July	151.2	200.0	157.6	177.7	209.0	161.7	179.6	161.7	143.0	120.7	170.0	168.7
August	150.9	200.0	157.2	177.7	209.0	162.9	180.8	162.9	143.0	120.7	170.0	169.1
September	150.9	200.0	156.8	177.7	209.0	163.2	180.4	163.2	143.0	120.7	170.0	169.1
October	151.0	200.0	155.5	177.7	208.2	163.4	178.7	163.4	143.0	133.1	170.0	170.0
November	151.0	200.0	156.9	177.7	208.2	163.0	178.9	163.0	143.0	135.0	170.0	170.1
December	151.5	200.0	156.7	177.7	208.2	162.0	179.8	162.0	143.0	119.6	170.0	168.6

[1] This figure somewhat exaggerates the decrease between July and November, owing to the fact that twice as many cities were covered in the later as in the earlier period, and the method of computation was slightly changed. The American Electric Railway Association, which computes its index on the basis of cash fares, showed a very small increase in average fares between July and November, 1925, as did the index computed by Albert S. Richey, in which rates are weighted by the number of passengers carried.

TABLE 20: RATES AND INDEXES OF CARFARE IN SPECIFIED CITIES, ON SPECIFIED DATES, DECEMBER, 1925 TO DECEMBER, 1929

Base, July, 1914 = 100

(Source: National Industrial Conference Board)

Locality	Rate of Fare							Index Numbers					
	July, 1914	Dec., 1925	Dec., 1926	Dec., 1927	Dec., 1928	June, 1929	Dec., 1929	Dec., 1925	Dec., 1926	Dec., 1927	Dec., 1928	June, 1929	Dec., 1929
Akron, Ohio	.042	.059	.059	.059	.059	.071	.071	140	140	140	140	168	168
Alameda, Cal.	.050	.060	.060	.070	.070	.070	.070	120	120	140	140	140	140
Albany, N. Y.	.050	.070	.070	.077	.077	.077	.077	140	140	154	154	154	154
Allentown, Pa.	.050	.070	.070	.075	.075	.075	.075	140	140	150	150	150	150
Altoona, Pa.	.040	.070	.070	.070	.070	.070	.070	175	175	175	175	175	175
Amsterdam, N. Y.	.042	.075	.075	.083	.083	.083	.083	179	179	198	198	198	198
Anderson, Ind.	.042	.050	.050	.050	.050	.050	.050	119	119	119	119	119	119
Asheville, N. C.	.042	.058	.058	.058	.058	.058	.058	138	138	138	138	138	138
Atlanta, Ga.	.050	.067	.067	.075	.075	.075	.075	134	134	150	150	150	150
Atlantic City, N. J.	.050	.050	.050	.070	.070	.070	.070	100	100	140	140	140	140
Auburn, N. Y.	.046	.070	.070	1	1	1	1	152	152	1	1	1	1
Augusta, Ga.	.050	.070	.070	.070	.070	.070	.070	140	140	140	140	140	140
Aurora, Ill.	.042	.071	.071	.071	.071	.071	.071	169	169	169	169	169	169
Austin, Tex.	.045	.063	.063	.063	.063	.063	.075	140	140	140	140	140	167
Baltimore, Md.	.050	.075	.075	.075	.088	.088	.088	150	150	150	176	176	176
Bangor, Me.	.050	.100	.100	.100	.100	.100	.100	200	200	200	200	200	200
Battle Creek, Mich.	.042	.063	.063	.083	.083	.083	.083	150	150	198	198	198	198
Bay City, Mich.	.042	.063	1	1	1	1	1	150	1	1	1	1	1
Bayonne, N. J.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Beaumont, Tex.	.050	.060	.060	.060	.060	.060	.060	120	120	120	120	120	120
Bellingham, Wash.	.042	.063	.063	.063	.063	.063	.063	150	150	150	150	150	150
Berkeley, Cal.	.050	.060	.060	.070	.070	.070	.070	120	120	140	140	140	140
Bethlehem, Pa.	.050	.070	.070	.075	.075	.075	.075	140	140	150	150	150	150
Binghamton, N. Y.	.050	.070	.070	.075	.075	.075	.075	140	140	150	150	150	150
Birmingham, Ala.	.050	.060	.060	.060	.060	.060	.060	120	120	120	120	120	120

Bloomington, Ill.	.042	.063	.063	.075	.083	.083	.083	150	150	179	198	198	198
Boston, Mass.[2]	.050	.100	.100	.100	.100	.100	.100	200	200	200	200	200	200
Bridgeport, Conn.	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Brockton, Mass.	.050	.071	.067	.067	.077	.077	.077	142	134	134	154	154	154
Brookline, Mass.	.050	.100	.100	.100	.100	.100	.100	200	200	200	200	200	200
Buffalo, N. Y.	.050	.075	.075	.083	.083	.083	.083	150	150	166	166	166	166
Butte, Mont.	.050	.063	.063	.063	.063	.063	.063	126	126	126	126	126	126
Cambridge, Mass.	.050	.100	.100	.100	.100	.100	.100	200	200	200	200	200	200
Camden, N. J.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Canton, Ohio	.042	.053	.053	.058	.058	.058	.058	126	126	138	138	138	138
Cedar Rapids, Ia.	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Charleston, S. C.	.050	.063	.063	.063	.063	.063	.063	126	126	126	126	126	126
Charleston, W. Va.	.042	.060	.060	.060	.060	.060	.060	143	143	143	143	143	143
Charlotte, N. C.	.046	.063	.063	.063	.063	.063	.063	137	137	137	137	137	137
Chattanooga, Tenn.	.040	.070	.070	.070	.070	.070	.070	175	175	175	175	175	175
Chelsea, Mass.	.050	.063	.071	.071	.071	.071	.071	126	142	142	142	142	142
Chester, Pa.	.050	.075	.075	.075	.075	.075	.075	150	150	150	150	150	150
Chicago, Ill.[3]	.050	.075	.075	.075	.084	.084	.084	150	150	150	168	168	168
Chicopee, Mass.	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Cicero, Ill.	.050	.100	.100	.100	.100	.100	.100	200	200	200	200	200	200
Cincinnati, Ohio	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Clarksburg, W. Va.	.045	.063	.063	.063	.063	.063	.063	140	140	140	140	140	140
Cleveland, Ohio	.030	.056	.063	.063	.063	.063	.063	187	210	210	210	210	210
Clifton, N. J.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Colorado Springs, Colo.	.050	.100	.075	.067	.067	.067	.067	200	150	134	134	134	134
Columbia, S. C.	.050	.070	.100	[1]	[1]	[1]	[1]	140	200	[1]	[1]	[1]	[1]
Columbus, Ga.	.050	.067	.067	.067	.067	.067	.067	134	134	134	134	134	134
Columbus, Ohio	.031	.050	.050	.050	.050	.050	.050	161	161	161	161	161	161
Council Bluffs, Ia.	.050	.063	.063	.100	.067	.067	.067	126	126	200	134	134	134
Covington, Ky.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100

[1] Service discontinued.

[2] Boston has a few hauls at a lower rate, without transfer privileges, but they are a very small part of the total business, and are not considered here.

[3] The Chicago surface lines and the Chicago Rapid Transit carry so nearly the same number of passengers that the changes in rates have been averaged evenly.

TABLE 20: RATES AND INDEXES OF CARFARE IN SPECIFIED CITIES, ON SPECIFIED DATES, DECEMBER, 1925 TO DECEMBER, 1929—(*Continued*)

Base, July, 1914 = 100

Locality	Rate of Fare							Index Numbers					
	July, 1914	Dec., 1925	Dec., 1926	Dec., 1927	Dec., 1928	June, 1929	Dec., 1929	Dec., 1925	Dec., 1926	Dec., 1927	Dec., 1928	June, 1929	Dec., 1929
Cranston, R. I.	.050	.070	.070	.070	.070	.070	.070	140	140	140	140	140	140
Cumberland, Md.	.050	.060	.060	.060	.060	.060	.060	120	120	120	120	120	120
Dallas, Tex.	.046	.060	.060	.060	.060	.060	.060	130	130	130	130	130	130
Danville, Ill.	.046	.060	.060	.060	.083	.083	.083	130	130	130	180	180	180
Davenport, Ia.	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Dayton, Ohio	.042	.050	.050	.050	.050	.050	.050	119	119	119	119	119	119
Decatur, Ill.	.042	.056	.056	.056	.083	.083	.083	133	133	133	198	198	198
Denver, Col.	.050	.075	.075	.075	.075	.075	.075	150	150	150	150	150	150
Des Moines, Ia.	.042	.100	.100	.100	.100	.100	.100	238	238	238	238	238	238
Detroit, Mich.	.042	.056	.056	.056	.056	.056	.056	133	133	133	133	133	133
Dubuque, Ia.	.025	.063	.063	.063	.063	.063	.063	252	252	252	252	252	252
Duluth, Minn.	.050	.060	.070	.070	.070	.075	.075	120	140	140	140	150	150
East Chicago, Ind.	.042	.071	.071	.071	.071	.071	.071	169	169	169	169	169	169
East Cleveland, Ohio	.030	.056	.056	.063	.063	.063	.063	187	187	210	210	210	210
Easton, Pa.	.050	.070	.070	.070	.070	.070	.070	140	140	140	140	140	140
East Orange, N. J.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
East St. Louis, Ill.	.050	.075	.080	.080	.080	.080	.080	150	160	160	160	160	160
Elgin, Ill.	.036	.071	.071	.071	.071	.071	.071	197	197	197	197	197	197
Elizabeth, N. J.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Elkhart, Ind.	.050	.050	.063	.063	.063	.063	.063	100	126	126	126	126	126
Elmira, N. Y.	.050	.070	.070	.070	.070	.070	.070	140	140	140	140	140	140
El Paso, Tex.	.050	.060	.060	.060	.060	.060	.060	120	120	120	120	120	120
Erie, Pa.	.050	.075	.075	.083	.083	.083	.083	150	150	166	166	166	166
Evanston, Ill.	.050	.060	.060	.055	.055	.055	.055	120	120	110	110	110	110
Evansville, Ind.	.042	.050	.063	.063	.063	.063	.063	119	150	150	150	150	150

Everett, Mass.	.050	.050	.050	.063	.063	.063	.063	100	100	126	126	126	126
Everett, Wash.	.050	.063	.063	.063	.063	.063	.063	126	126	126	126	126	126
Fall River, Mass.	.050	.053	.056	.056	.063	.063	.063	106	112	112	126	126	126
Fitchburg, Mass.	.050	.100	.100	.100	.100	.100	.100	200	200	200	200	200	200
Flint, Mich.	.050	.060	.060	.059	.059	.059	.059	120	120	118	118	118	118
Fort Smith, Ark.	.050	.075	.075	.075	.075	.075	.075	150	150	150	150	150	150
Fort Wayne, Ind.	.042	.063	.063	.063	.063	.063	.063	150	150	150	150	150	150
Fort Worth, Tex.	.046	.070	.070	.083	.083	.083	.083	152	152	180	180	180	180
Fresno, Cal.	.050	.060	.060	.067	.067	.067	.067	120	120	134	134	134	134
Galveston, Tex.	.050	.060	.060	.060	.075	.075	.075	120	120	120	150	150	150
Gary, Ind.	.042	.071	.071	.071	.071	.071	.071	169	169	169	169	169	169
Grand Rapids, Mich.	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Green Bay, Wis.	.042	.063	.063	.063	.083	.083	.083	150	150	150	198	198	198
Hagerstown, Md.	.050	.060	.060	.060	.060	.060	.070	120	120	120	120	120	140
Hamilton, Ohio.	.042	.050	.050	.050	.050	.050	.050	119	119	119	119	119	119
Hammond, Ind.	.042	.071	.071	.071	.071	.071	.071	169	169	169	169	169	169
Hamtramck, Mich.	.042	.056	.056	.056	.056	.056	.056	133	133	133	133	133	133
Harrisburg, Pa.	.050	.060	.060	.060	.070	.070	.070	120	120	120	140	140	140
Hartford, Conn.	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Haverhill, Mass.	.050	.083	.091	.091	.100	.100	.083	166	182	182	200	200	166
Hazleton, Pa.	.045	.065	.065	.065	.065	.065	.065	144	144	144	144	144	144
Highland Park, Mich.	.042	.056	.056	.056	.056	.056	.056	133	133	133	133	133	133
Hoboken, N. J.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Holyoke, Mass.	.050	.060	.060	.075	.075	.083	.083	120	120	150	150	166	166
Houston, Tex.	.050	.063	.063	.075	.075	.075	.075	126	126	150	150	150	150
Huntington, W. Va.	.050	.060	.060	.060	.060	.060	.060	120	120	120	120	120	120
Indianapolis, Ind.	.042	.063	.063	.063	.063	.063	.063	150	150	150	150	150	150
Irvington, N. J.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Jackson, Mich.	.042	.063	.063	.083	.083	.083	.083	150	150	198	198	198	198
Jacksonville, Fla.	.050	.070	.070	.070	.070	.070	.070	140	140	140	140	140	140
Jamestown, N. Y.	.046	.070	.075	.075	.075	.075	.075	152	163	163	163	163	163
Jersey City, N. J.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Johnstown, Pa.	.050	.075	.075	.083	.083	.083	.083	150	150	166	166	166	166
Joliet, Ill.	.050	.100	.100	.100	.100	.100	.100	200	200	200	200	200	200
Joplin, Mo.	.050	.060	.080	.075	.075	.075	.075	120	160	150	150	150	150

TABLE 20: RATES AND INDEXES OF CARFARE IN SPECIFIED CITIES, ON SPECIFIED DATES, DECEMBER, 1925 TO DECEMBER, 1929—(*Continued*)

Base, July, 1914 = 100

Locality	Rate of Fare							Index Numbers					
	July, 1914	Dec., 1925	Dec., 1926	Dec., 1927	Dec., 1928	June, 1929	Dec., 1929	Dec., 1925	Dec., 1926	Dec., 1927	Dec., 1928	June, 1929	Dec., 1929
Kalamazoo, Mich.	.042	.063	.063	.083	.083	.083	.083	150	150	198	198	198	198
Kansas City, Kan.	.050	.070	.070	.067	.067	.067	.067	140	140	134	134	134	134
Kansas City, Mo.	.050	.070	.070	.067	.067	.067	.067	140	140	134	134	134	134
Kearney, N. J.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Kenosha, Wis.	.050	.063	.063	.058	.058	.058	.058	126	126	116	116	116	116
Kingston, N. Y.	.050	.080	.080	.080	.080	.080	.080	160	160	160	160	160	160
Knoxville, Tenn.	.050	.060	.050	.060	.060	.060	.060	120	100	120	120	120	120
Kokomo, Ind.	.042	.050	.050	.050	.050	.050	.050	119	119	119	119	119	119
La Crosse, Wis.	.050	.056	.056	.063	.063	.063	.071	112	112	126	126	126	142
Lakewood, Ohio	.030	.030	.030	.030	.030	.050	.050	100	100	100	100	167	167
Lancaster, Pa.	.050	.060	.060	.063	.063	.063	.063	120	120	126	126	126	126
Lansing, Mich.	.050	.063	.063	.071	.071	.071	.071	126	126	142	142	142	142
Lawrence, Mass.	.050	.063	.067	.067	.071	.071	.071	126	134	134	142	142	142
Lewiston, Me.	.046	.100	.100	.100	.100	.100	.100	217	217	217	217	217	217
Lexington, Ky.	.042	.063	.063	.075	.075	.075	.075	150	150	179	179	179	179
Lima, Ohio	.042	.063	.063	.063	.063	.063	.063	150	150	150	150	150	150
Lincoln, Neb.	.042	.075	.075	.075	.075	.075	.075	179	179	179	179	179	179
Little Rock, Ark.	.050	.060	.060	.060	.060	.060	.060	120	120	120	120	120	120
Long Beach, Cal.	.050	.060	.060	.060	.050	.050	.050	120	120	120	100	100	100
Lorain, Ohio	.042	.050	.050	.050	.070	.070	.070	119	119	119	167	167	167
Los Angeles, Cal.[4]	.050	.057	.057	.057	.054	.054	.054	114	114	114	108	108	108
Louisville, Ky.	.050	.060	.070	.070	.070	.070	.083	120	140	140	140	140	166
Lowell, Mass.	.050	.067	.071	.071	.077	.077	.077	134	142	142	154	154	154
Lynchburg, Va.	.042	.050	.050	.050	.063	.063	.063	119	119	119	150	150	150
Lynn, Mass.	.050	.056	.059	.059	.063	.063	.063	112	118	118	126	126	126
Macon, Ga.	.050	.067	.067	.067	.075	.075	.075	134	134	134	150	150	150
Madison, Wis.	.050	.059	.059	.059	.063	.063	.063	118	118	118	126	126	126
Malden, Mass.	.050	.050	.050	.063	.063	.063	.063	100	100	126	126	126	126
Manchester, N. H.	.050	.075	.075	.075	.075	.075	.075	150	150	150	150	150	150
Mansfield, Ohio	.050	.080	.080	.080	.080	.080	.080	160	160	160	160	160	160

Marion, Ohio	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
McKeesport, Pa	.030	.063	.063	.063	.063	.063	.063	210	210	210	210	210	210
Medford, Mass	.050	.100	.100	.063	.063	.063	.063	200	200	126	126	126	126
Memphis, Tenn	.045	.070	.070	.070	.070	.070	.070	156	156	156	156	156	156
Meriden, Conn	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Miami, Fla	.050	.050	.050	.050	.050	.050	.070	100	100	100	100	100	140
Milwaukee, Wis	.042	.063	.063	.063	.063	.063	.063	150	150	150	150	150	150
Minneapolis, Minn	.050	.060	.067	.067	.067	.075	.075	120	134	134	134	150	150
Mobile, Ala	.050	.070	.070	.075	.075	.075	.075	140	140	150	150	150	150
Moline, Ill	.050	.071	.071	.083	.083	.083	.083	142	142	166	166	166	166
Montclair, N. J	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Montgomery, Ala	.050	.063	.063	.063	.063	.063	.063	126	126	126	126	126	126
Mount Vernon, N. Y	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Muncie, Ind	.042	.050	.050	.050	.050	.050	.050	119	119	119	119	119	119
Muskegon, Mich	.040	.075	.075	.075	.075	.075	.075	188	188	188	188	188	188
Muskogee, Okla	.050	.070	.070	.083	.075	.075	.075	140	140	166	150	150	150
Nashua, N. H	.050	.083	.083	.070	.070	.070	.070	166	166	140	140	140	140
Nashville, Tenn	.050	.070	.070	.070	.070	.070	.070	140	140	140	140	140	140
Newark, N. J	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Newark, Ohio	.042	.060	.060	.060	.060	.060	.060	143	143	143	143	143	143
New Bedford, Mass	.048	.048	.048	.063	.063	.063	.063	100	100	131	131	131	131
New Britain, Conn	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
New Brunswick, N. J	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Newburgh, N. Y	.050	.070	.070	[1]	[1]	[1]	[1]	140	140	[1]	[1]	[1]	[1]
New Castle, Pa	.050	.063	.063	.063	.063	.063	.063	126	126	126	126	126	126
New Haven, Conn	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
New London, Conn	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
New Orleans, La	.050	.070	.070	.070	.070	.070	.070	140	140	140	140	140	140
Newport, Ky	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Newport, R. I	.050	.100	.100	[1]	[1]	[1]	[1]	200	200	[1]	[1]	[1]	[1]

[1] Service discontinued.

[4] In Los Angeles, the Pacific Electric Railway Company carries more than twice as many passengers as the Los Angeles Railway Corporation. The fare charged by the latter has, therefore, been weighted one, and the former, two.

TABLE 20: RATES AND INDEXES OF CARFARE IN SPECIFIED CITIES, ON SPECIFIED DATES, DECEMBER, 1925 TO DECEMBER, 1929—(*Continued*)

Base, July, 1914 = 100

Locality	Rate of Fare							Index Numbers					
	July, 1914	Dec., 1925	Dec., 1926	Dec., 1927	Dec., 1928	June, 1929	Dec., 1929	Dec., 1925	Dec., 1926	Dec., 1927	Dec., 1928	June, 1929	Dec., 1929
Newport News, Va.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
New Rochelle, N. Y.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Newton, Mass.	.050	.100	.100	.063	.063	.063	.063	200	200	126	126	126	126
New York, N. Y.[5]	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Niagara Falls, N. Y.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Norfolk, Va.	.050	.063	.088	.088	.088	.088	.088	126	176	176	176	176	176
Norristown, Pa.	.050	.085	.085	.085	.085	.085	.085	170	170	170	170	170	170
Norwalk, Conn.	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Norwich, Conn.	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Oakland, Cal.	.050	.060	.070	.070	.070	.070	.070	120	140	140	140	140	140
Oak Park, Ill.	.050	.100	.100	.100	.100	.100	.100	200	200	200	200	200	200
Ogden, Utah	.050	.067	.067	.067	.067	.067	.067	134	134	134	134	134	134
Oklahoma City, Okla.	.050	.075	.075	.075	.075	.075	.075	150	150	150	150	150	150
Omaha, Neb.	.050	.067	.067	.067	.067	.067	.067	134	134	134	134	134	134
Orange, N. J.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Oshkosh, Wis.	.031	.071	.071	.070	.070	.070	.070	229	229	226	226	226	226
Pasadena, Cal.	.050	.053	.063	.063	.063	.063	.063	106	126	126	126	126	126
Passaic, N. J.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Paterson, N. J.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Pawtucket, R. I.	.050	.070	.070	.070	.070	.070	.070	140	140	140	140	140	140
Pensacola, Fla.	.048	.075	.075	.075	.075	.075	.075	156	156	156	156	156	156
Peoria, Ill.	.042	.071	.071	.071	.083	.083	.083	169	169	169	198	198	198
Perth Amboy, N. J.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Petersburg, Va.	.050	.050	.050	.063	.063	.063	.063	100	100	126	126	126	126
Philadelphia, Pa.	.050	.075	.075	.075	.075	.075	.075	150	150	150	150	150	150

Phoenix, Ariz.	.048	.063	.063	.050	.050	.050	.050	131	131	104	104	104	104
Pittsburgh, Pa.	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Pittsfield, Mass.	.050	.060	.060	.060	.060	.060	.060	120	120	120	120	120	120
Plainfield, N. J.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Pontiac, Mich.	.050	.056	.056	.059	.059	.059	.059	112	112	118	118	118	118
Port Huron, Mich.	.050	.056	.056	.059	.059	.059	.083	112	112	118	118	118	166
Portland, Me.	.050	.080	.080	.080	.100	.100	.100	160	160	160	200	200	200
Portland, Ore.	.045	.073	.073	.075	.075	.075	.075	162	162	167	167	167	167
Portsmouth, Ohio.	.036	.036	.036	.067	.067	.067	.067	100	100	186	186	186	186
Portsmouth, Va.	.050	.060	.063	.063	.063	.063	.063	120	126	126	126	126	126
Poughkeepsie, N. Y.	.050	.092	.092	.083	.083	.083	.083	184	184	166	166	166	166
Providence, R. I.	.050	.070	.070	.070	.070	.070	.070	140	140	140	140	140	140
Pueblo, Col.	.046	.060	.067	.067	.067	.067	.067	130	146	146	146	146	146
Quincy, Ill.	.042	.063	.063	.063	.063	.063	.063	150	150	150	150	150	150
Quincy, Mass.	.050	.067	.071	.071	.083	.083	.083	134	142	142	166	166	166
Racine, Wis.	.050	.058	.058	.058	.058	.058	.058	116	116	116	116	116	116
Reading, Pa.	.050	.070	.070	.070	.070	.070	.070	140	140	140	140	140	140
Revere, Mass.	.050	.071	.071	.071	.071	.071	.071	142	142	142	142	142	142
Richmond, Ind.	.042	.050	.050	.050	.050	.050	.050	119	119	119	119	119	119
Richmond, Va.	.042	.060	.060	.070	.070	.070	.070	143	143	167	167	167	167
Roanoke, Va.	.040	.050	.050	.050	.063	.063	.063	125	125	125	158	158	158
Rochester, N. Y.	.050	.065	.075	.083	.083	.083	.083	130	150	166	166	166	166
Rockford, Ill.	.050	.063	.063	.063	.063	.063	.063	126	126	126	126	126	126
Rock Island, Ill.	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Rome, N. Y.	.050	.070	.070	.083	.083	.083	.083	140	140	166	166	166	166
Sacramento, Cal.	.050	.050	.050	.050	.063	.063	.063	100	100	100	126	126	126
Saginaw, Mich.	.042	.083	.083	.083	.083	.083	.083	198	198	198	198	198	198
St. Joseph, Mo.	.042	.067	.067	.067	.067	.067	.067	160	160	160	160	160	160
St. Louis, Mo.	.050	.070	.070	.075	.080	.080	.083	140	140	150	160	160	166
St. Paul, Minn.	.050	.060	.067	.067	.067	.075	.075	120	134	134	134	150	150

[5] On some surface lines in New York transfers have been abolished; on others, a charge of two cents is made for transfers where formerly they were free; on Staten Island, an 8-cent fare has superseded the original 5-cent fare on some lines. Since there is no means of weighting these charges to show the extent of the increased cost on the total number carried and it is probably small in proportion to the whole, they have been disregarded.

TABLE 20: RATES AND INDEXES OF CARFARE IN SPECIFIED CITIES, ON SPECIFIED DATES, DECEMBER, 1925 TO DECEMBER, 1929—(*Concluded*)

Base, July, 1914 = 100

Locality	Rate of Fare							Index Numbers					
	July, 1914	Dec., 1925	Dec., 1926	Dec., 1927	Dec., 1928	June, 1929	Dec., 1929	Dec., 1925	Dec., 1926	Dec., 1927	Dec., 1928	June, 1929	Dec., 1929
Salem, Mass.	.050	.063	.067	.067	.071	.071	.071	126	134	134	142	142	142
Salt Lake City, Utah	.050	.063	.077	.077	.077	.077	.077	126	154	154	154	154	154
San Antonio, Tex.	.050	.060	.060	.083	.083	.083	.083	120	120	166	166	166	166
San Diego, Cal.	.050	.075	.075	.050	.050	.050	.050	150	150	100	100	100	100
San Francisco, Cal.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
San Jose, Cal.	.050	.060	.060	.060	.063	.063	.063	120	120	120	126	126	126
Savannah, Ga.	.048	.067	.067	.067	.083	.083	.083	140	140	140	173	173	173
Schenectady, N. Y.	.050	.070	.070	.070	.083	.083	.083	140	140	140	166	166	166
Scranton, Pa.	.050	.075	.075	.075	.075	.075	.075	150	150	150	150	150	150
Seattle, Wash.	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Sheboygan, Wis.	.042	.071	.071	.070	.070	.070	.070	169	169	167	167	167	167
Shreveport, La.	.050	.059	.070	.070	.075	.075	.075	118	140	140	150	150	150
Sioux City, Ia.	.050	.063	.063	.075	.083	.083	.083	126	126	150	166	166	166
Sioux Falls, S. D.	.050	.059	.067	.067	.067	.067	.067	118	134	134	134	134	134
Somerville, Mass.	.050	.100	.100	.100	.100	.100	.100	200	200	200	200	200	200
South Bend, Ind.	.050	.063	.063	.063	.063	.063	.063	126	126	126	126	126	126
Spokane, Wash.	.045	.060	.070	.070	.070	.070	.070	133	156	156	156	156	156
Springfield, Ill.	.042	.063	.063	.063	.083	.083	.083	150	150	150	198	198	198
Springfield, Mass.	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Springfield, Mo.	.042	.063	.063	.063	.063	.063	.063	150	150	150	150	150	150
Springfield, Ohio.	.040	.063	.063	.063	.063	.063	.063	158	158	158	158	158	158
Stamford, Conn.	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Steubenville, Ohio.	.042	.050	.050	.050	.050	.050	.050	119	119	119	119	119	119
Stockton, Cal.	.050	.060	.060	.060	.063	.063	.063	120	120	120	126	126	126
Superior, Wis.	.042	.060	.060	.070	.070	.075	.075	143	143	167	167	179	179

Syracuse, N. Y.	.050	.070	.070	.075	.075	.075	.075	140	140	150	150	150	150
Tacoma, Wash.	.050	.080	.080	.050	.050	.050	.050	160	160	100	100	100	100
Tampa, Fla.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Taunton, Mass.	.050	.071	.077	.077	.083	.083	.083	142	154	154	166	166	166
Terre Haute, Ind.	.042	.050	.050	.050	.050	.050	.050	119	119	119	119	119	119
Toledo, Ohio	.042	.083	.083	.083	.083	.083	.083	198	198	198	198	198	198
Topeka, Kan.	.050	.063	.063	.063	.063	.063	.063	126	126	126	126	126	126
Trenton, N. J.	.050	.080	.080	.080	.080	.080	.080	160	160	160	160	160	160
Troy, N. Y.	.050	.070	.070	.077	.077	.077	.077	140	140	154	154	154	154
Tulsa, Okla.	.050	.063	.063	.075	.083	.083	.083	126	126	150	166	166	166
Utica, N. Y.	.050	.070	.075	.075	.075	.075	.075	140	150	150	150	150	150
Waco, Tex.	.050	.063	.063	.063	.063	.063	.063	126	126	126	126	126	126
Waltham, Mass.	.060	.100	.100	.100	.100	.100	.100	167	167	167	167	167	167
Warren, Ohio	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Washington, D. C.	.042	.067	.067	.067	.067	.067	.067	160	160	160	160	160	160
Waterbury, Conn.	.050	.083	.083	.083	.083	.083	.083	166	166	166	166	166	166
Waterloo, Ia.	.042	.075	.075	.075	.075	.075	.075	179	179	179	179	179	179
Watertown, N. Y.	.040	.063	.063	.071	.071	.071	.071	158	158	178	178	178	178
West Hoboken, N. J.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
West New York, N. J.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
Wheeling, W. Va.	.042	.050	.050	.050	.050	.050	.050	119	119	119	119	119	119
Wichita, Kan.	.042	.056	.056	.056	.056	.056	.056	133	133	133	133	133	133
Wichita Falls, Tex.	.050	.055	.055	.055	.055	.055	.055	110	110	110	110	110	110
Wilkes-Barre, Pa.	.050	.075	.075	.075	.075	.075	.075	150	150	150	150	150	150
Williamsport, Pa.	.042	.050	.050	.075	.075	.075	.075	119	119	179	179	179	179
Wilmington, Del.	.050	.075	.075	.075	.075	.075	.075	150	150	150	150	150	150
Wilmington, N. C.	.042	.075	.075	.075	.075	.075	.075	179	179	179	179	179	179
Winston-Salem, N. C.	.046	.063	.063	.063	.063	.063	.063	137	137	137	137	137	137
Woonsocket, R. I.	.050	.070	.070	.070	.070	.070	.070	140	140	140	140	140	140
Worcester, Mass.	.050	.100	.100	.100	.100	.100	.100	200	200	200	200	200	200
Yonkers, N. Y.	.050	.050	.050	.050	.050	.050	.050	100	100	100	100	100	100
York, Pa.	.042	.063	.063	.063	.063	.063	.063	150	150	150	150	150	150
Youngstown, Ohio	.040	.071	.071	.071	.083	.083	.083	178	178	178	208	208	208
Zanesville, Ohio	.050	.056	.063	.063	.063	.063	.063	112	126	126	126	126	126
United States	..	..	..	..	..	..	..	142	145	147	151	151	152

over July, 1914 prices. They remained at this level for a short time, but dropped suddenly after July, 1921 to 55% over July, 1914 in November, 1921, and have continued to decline since then. At the beginning of 1929 they were still 35% over July, 1914, but in May, 1929 another rather drastic reduction occurred so that the increase over July, 1914 amounted to only about 21%. Prices advanced again in October and November, but in December, 1929 they were only 20% over July, 1914.

Carfares had reached their highest level in the period from November, 1921 to July, 1922, when they were 60% greater than in July, 1914. They declined somewhat after that period but advanced again later so that at present they are only slightly below the level of 1921 and 1922. In December, 1929 they were 52% higher than in July, 1914, or somewhat below the general increase of the total cost of living. In Table 20 are presented for all of the cities covered by the survey both actual rates of fare and the index numbers for July, 1914 and various dates since November, 1925. The average rate[1] for the country as a whole in July, 1914 was 4.7 cents, with most of the rates varying between 4 cents and 5 cents, although in one city they were 2½ cents and in another 6 cents. In December, 1929 the average rate[1] was 7 cents, the rates ranging from 5 cents to 10 cents.

TABLE 21: INDEXES OF SEASONAL VARIATIONS IN FOUR MAJOR ITEMS AND THE TOTAL COST OF LIVING[2]

(Source: National Industrial Conference Board)

Month	All Items	Food	Housing	Clothing	Fuel and Light
January	100.4	100.3	100.4	99.7	102.1
February	99.8	99.1	100.1	99.7	102.1
March	99.4	98.1	100.4	99.7	101.3
April	99.1	98.0	100.1	99.7	99.2
May	99.3	98.4	100.2	100.2	97.9
June	99.5	99.3	100.0	99.4	98.0
July	99.6	99.7	99.9	99.4	98.0
August	99.6	99.5	99.9	100.0	98.9
September	100.2	100.8	99.8	100.5	99.9
October	100.7	101.6	99.6	100.8	100.7
November	101.1	102.6	99.9	100.5	101.0
December	101.0	102.4	99.6	100.4	101.1

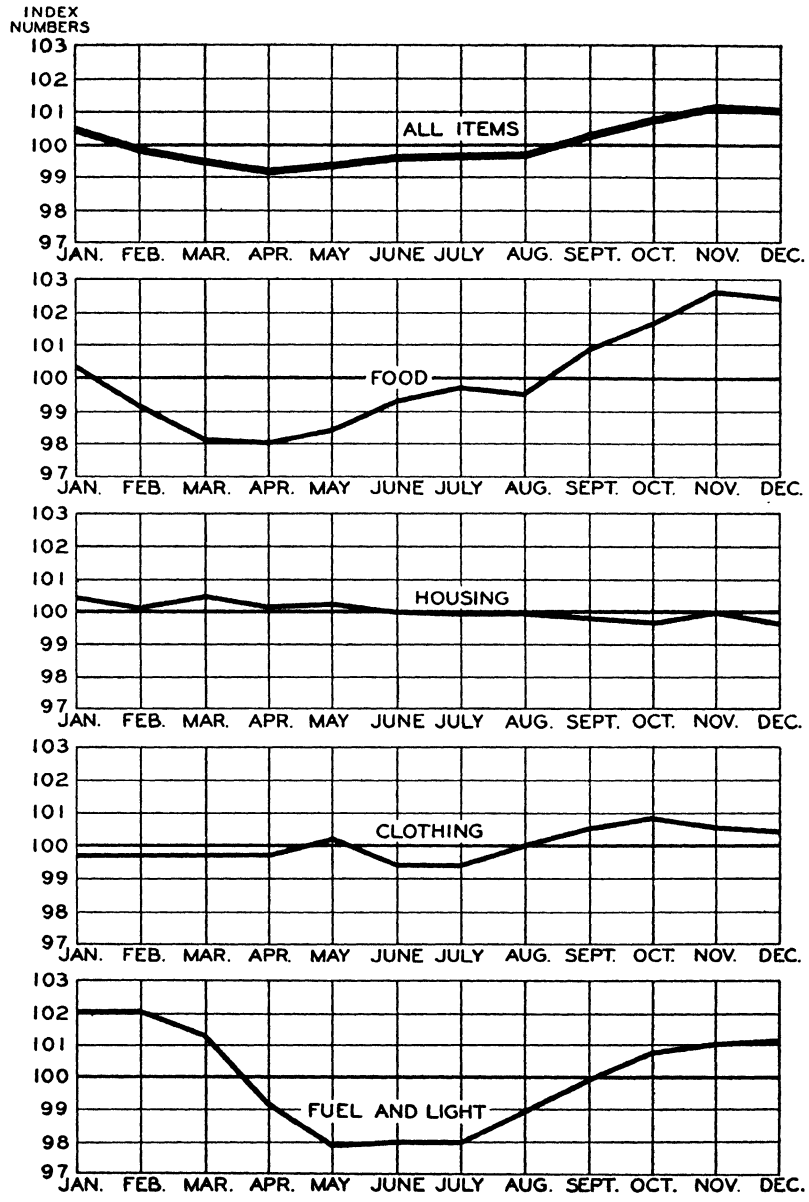
[1] Simple average of all rates.

[2] Average index of each group for the period 1922–1929 equals 100.

CHART 7: INDEXES OF SEASONAL VARIATIONS IN THE COST OF LIVING AND ITS MAJOR ITEMS

Base, Average of 1922–1929 = 100

(Source: National Industrial Conference Board)



Purchasing Value of the Dollar

Another way of looking at changes in the cost of commodities and services entering into household consumption is by means of the purchasing value of the dollar. Prices express the value of commodities in terms of money; the buying power of money expresses the value of money in terms of commodities. When prices rise, the quantity of

Table 22: Purchasing Value of a Dollar Based on Increases in the Cost of Living, on Specified Dates, July, 1914 to December, 1929

(Source: National Industrial Conference Board)

Date	Value of Dollar	Date	Value of Dollar	Date	Value of Dollar
1914		1925		1928	
July	$1.00	March	$0.605	January	$0.613
1915		July	0.593	February	0.619
July	0.995	November	0.584[1]	March	0.621
1916		December	0.583[1]	April	0.622
July	0.920	1926		May	0.619
1917		January	0.587[1]	June	0.622
July	0.762	February	0.590[1]	July	0.621
1918		March	0.593	August	0.620
June	0.657	April	0.593	September	0.612
November	0.606	May	0.595	October	0.614
1919		June	0.597	November	0.615
March	0.623	July	0.602	December	0.617
July	0.581	August	0.604	1929	
November	0.549	September	0.600	January	0.622
1920		October	0.598	February	0.621
March	0.513	November	0.594	March	0.626
July	0.489	December	0.594	April	0.628
November	0.518	1927		May	0.627
1921		January	0.599	June	0.625
March	0.593	February	0.605	July	0.619
July	0.613	March	0.609	August	0.614
November	0.613	April	0.611	September	0.613
1922		May	0.611	October	0.612
March	0.646	June	0.607	November	0.613
July	0.643	July	0.617	December	0.617
November	0.631	August	0.617		
1923		September	0.614		
March	0.628	October	0.611		
July	0.618	November	0.609		
November	0.604	December	0.611		
1924					
March	0.614				
July	0.618				
November	0.605				

[1] These figures include an estimate for fuel cost changes based on prices of anthracite substitutes.

goods which can be purchased with one dollar diminishes, hence the purchasing value of the dollar declines. On the other hand, when prices fall, the purchasing value of the dollar rises. In other words, the purchasing value of the dollar always varies inversely with prices.

The purchasing value of the dollar as based on the cost of living is obtained by dividing one dollar by the index of the cost of living, the resulting figure showing how many cents were required in July, 1914 to buy the same quantity of goods for which one dollar has to be paid on the date represented by the index.

The purchasing value of the dollar based on the Conference Board index of the total cost of living is given in Table 22 for each date on which comprehensive investigations were made.[1]

[1] Except for the 1915–1917 indexes, for which interpolated figures have been used.

CHAPTER IV

OTHER STUDIES ILLUSTRATIVE OF VARIOUS TYPES OF MEASUREMENT

IT was pointed out in Chapter I that various phases of the "cost of living" could be measured. In the next chapter was described one of these types of measurements, namely, the index of the National Industrial Conference Board, which is a periodical measurement of changes in retail prices affecting the cost of living. In the present chapter it is proposed to present briefly the results of two other time series published currently in the United States, and to summarize some of the studies made in recent years which are illustrative of other aspects of living cost measurements.

TIME SERIES

Other series currently published in the United States showing changes in the cost of living in the course of time are those of the United States Bureau of Labor Statistics, referring to the United States as a whole, and those of the Massachusetts Special Commission on the Necessaries of Life, covering the state of Massachusetts. The methods of constructing both of these indexes were described in detail in a former report of the Conference Board.[1] This volume will merely reproduce some of the indexes published in order to afford a comparison with the figures published by the Conference Board.

Comparison of Indexes of the United States Bureau of Labor Statistics, the Massachusetts Commission and the National Industrial Conference Board

Tables 23 and 24, respectively, present the index numbers for specified dates as compiled by the Bureau and the Massa-

[1] National Industrial Conference Board, "The Cost of Living in the United States, 1914–1926," New York, 1926.

TABLE 23: INDEXES OF THE COST OF LIVING IN THE UNITED STATES, BY MAJOR ITEMS, COMPUTED BY THE UNITED STATES BUREAU OF LABOR STATISTICS

Base, 1913 = 100

Date	Food	Rent	Clothing	Fuel and Light	House Furnishing Goods	Miscellaneous	All Items
1914							
December	105.0	100.0	101.0	101.0	104.0	103.0	103.0
1915							
December	105.0	101.5	104.7	101.0	110.6	107.4	105.1
1916							
December	126.0	102.3	120.0	108.4	127.8	113.3	118.3
1917							
December	157.0	100.1	149.1	124.1	150.6	140.5	142.4
1918							
December	187.0	109.2	205.3	147.9	213.6	165.8	174.4
1919							
December	197.0	125.3	268.7	156.8	263.5	190.2	199.3
1920							
December	178.0	151.1	258.5	194.9	285.4	208.2	200.4
1921							
December	149.9	161.4	184.4	181.1	218.0	206.8	174.3
1922							
June	140.7	160.9	172.3	174.2	202.9	201.5	166.4
December	146.6	161.9	171.5	186.4	208.2	200.5	169.5
1923							
June	144.3	163.4	174.9	180.6	222.2	200.3	169.7
December	150.3	166.5	176.3	184.0	222.4	201.7	173.2
1924							
June	142.4	168.0	174.2	177.3	216.0	201.1	169.1
December	151.5	168.2	171.3	180.5	216.0	201.7	172.5
1925							
June	155.0	167.4	170.6	176.5	214.3	202.7	173.5
December	165.5	167.1	169.4	186.9	214.3	203.5	177.9
1926							
June	159.7	165.4	168.2	180.7	210.4	203.3	174.8
December	161.8	164.2	166.7	188.3	207.7	203.9	175.6
1927							
June	158.5	162.1	164.9	180.8	205.2	204.5	173.4
December	155.9	160.2	162.9	183.2	204.6	205.1	172.0
1928							
June	152.6	157.6	162.6	177.2	201.1	205.5	170.0
December	155.8	155.9	161.9	181.3	199.7	207.1	171.3
1929							
June	154.8	153.7	161.3	175.2	198.5	207.3	170.2
December	158.0	151.9	160.5	178.7	197.7	207.9	171.4

chusetts Special Commission. These two series and that of the Conference Board are plotted in Chart 8. It will be noted that the three series display much similarity in movement as far as time and magnitude are concerned, but the respective levels vary. The United States Bureau of Labor

TABLE 24: INDEXES OF THE COST OF LIVING IN MASSACHUSETTS, COMPUTED BY THE SPECIAL COMMISSION ON THE NECESSARIES OF LIFE (MASSACHUSETTS)

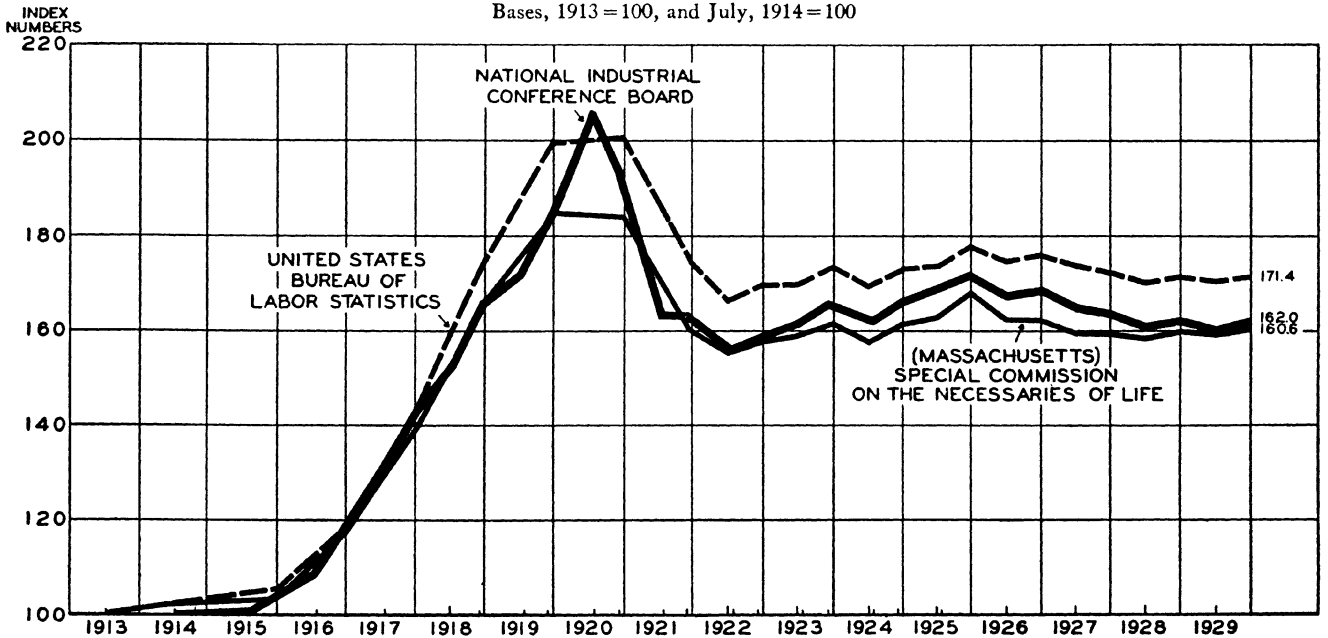
Base, 1913 = 100

Date	Food	Shelter	Clothing	Fuel and Light	Sundries	Combined	Combined Recomputed on a July, 1914 Base[1]
1914							
July	103.3	103.5	101.7	97.3	100.0	102.1	100.0
1915							
December	103.0	104.1	108.8	100.7	101.5	103.5	101.4
1916							
December	124.7	105.3	125.2	113.3	109.0	117.5	115.1
1917							
December	155.7	103.1	159.9	114.7	130.0	139.6	136.7
1918							
December	183.1	116.4	209.4	143.1	155.0	166.1	162.7
1919							
December	189.1	129.6	272.3	143.5	175.0	184.7	180.9
1920							
December	179.6	151.7	226.0	189.9	192.0	183.9	180.1
1921							
December	139.4	161.0	186.1	180.5	178.0	159.6	156.3
1922							
June	134.1	162.5	176.5	172.7	174.0	155.0	151.8
December	139.8	162.5	179.4	184.8	168.8	157.5	154.3
1923							
June	140.0	167.0	184.1	177.4	170.5	158.9	155.6
December	144.1	167.5	186.1	181.7	170.5	161.3	158.0
1924							
June	137.1	168.0	181.6	177.2	171.4	157.7	154.5
December	143.0	172.0	181.2	179.6	172.2	161.2	157.9
1925							
June	146.8	172.0	182.3	176.6	172.2	162.8	159.5
December	155.6	170.0	186.6	197.4	172.2	168.0	164.5
1926							
June	148.3	168.0	181.2	182.0	170.5	162.5	159.2
December	147.9	168.0	177.5	185.5	171.4	162.3	159.0
1927							
June	145.5	166.0	173.3	178.4	170.5	159.7	156.4
December	145.0	165.0	172.8	181.4	170.5	159.5	156.2
1928							
June	144.6	165.0	172.1	175.4	170.0	158.7	155.4
December	147.6	163.0	172.8	179.6	170.0	160.0	156.7
1929							
January	148.5	163.0	173.3	179.5	170.0	160.5	157.2
February	146.5	163.0	170.1	179.6	169.2	159.0	155.7
March	147.6	163.0	174.1	179.7	169.2	160.0	156.7
April	147.7	163.0	173.6	177.9	168.9	159.8	156.5
May	149.1	163.0	173.6	174.2	168.9	160.2	156.9
June	148.1	163.0	173.6	174.2	167.9	159.6	156.3
July	151.8	163.0	172.2	176.4	167.7	161.1	157.8
August	154.7	163.0	173.6	176.3	167.7	162.5	159.2
September	153.0	163.0	173.2	178.9	167.7	161.9	158.6
October	152.1	163.0	173.5	179.0	168.4	161.7	158.4
November	149.3	163.0	173.6	179.1	169.2	160.7	157.4
December	148.9	163.0	174.0	179.3	169.2	160.6	157.3

[1] Computed by the National Industrial Conference Board.

Chart 8: Indexes of the Cost of Living Computed by Three Authorities

Bases, 1913 = 100, and July, 1914 = 100



Statistics' index shows the highest level and that of the Massachusetts Commission the lowest. However, inasmuch as the latter index refers only to a limited area, it is not strictly comparable with the other two. The indexes of both the Bureau of Labor Statistics and the Conference Board are intended to show average changes in the United States as a whole. Except for food, however, the Conference Board index is based on prices collected in many more localities than are covered by the Bureau, and this probably accounts for the difference in the two levels.

Place Comparisons

Several studies may be cited as examples of place comparisons, including one by Teachers College, Columbia University, another by the National Industrial Conference Board, and several surveys by the Massachusetts Special Commission on the Necessaries of Life.

Teachers in Eighty-five Communities in New York

Teachers College, Columbia University, published in 1928 the results of a study "to ascertain the variations in the costs of living of teachers among certain communities of New York State, and to utilize this knowledge in deriving a technique for correcting the measure of educational need of the communities of the state."[1] For purposes of the study a list of articles and services was selected to represent the budget of a single woman teacher living away from home. These commodities and services were priced in each of the eighty-five communities[2] and the average price secured in each community for each commodity or service was multiplied by the quantity estimated to be used, thus obtaining the cost of the total budget in each community.

In the selection of food, the list of the United States Bureau of Labor Statistics was closely followed.[3] The forty-

[1] David P. Harry, Jr., "Cost of Living of Teachers in the State of New York," Teachers College, Columbia University, Contributions to Education, No. 320, New York City, 1928, p. 1.

[2] For a list of these communities, see pp. 150–151 of this volume.

[3] See p. 36 of this volume for the food budget of the U. S. Bureau of Labor Statistics.

three articles were increased to eighty-four individual items by taking several brands of some of the articles. This was done in order to secure prices for each of the forty-three articles in each one of the communities studied. The weights used by the Bureau were adopted with some modifications. Rent costs were obtained for a single room with definite specifications as to type of neighborhood, type of house, cleanliness, etc. The selection of the clothing budget involved great difficulties. As finally adopted, it consisted of the following articles and services, weighted as indicated;[1] Coats—dress and sport (25); dresses—silk, wool and cotton (30); hats (10); shoes (10); dry cleaning and shoe repairs (5); and constants (20). The last group was used to represent stockings, lingerie and miscellaneous articles of clothing. The weights for the various groups were based on the opinion of forty-one advanced students of Home Economics at Teachers College, Columbia University.

The sundries group included the following items, the figures in parentheses indicating the weights assigned to each group within the total sundries group: health, doctor, dentist, medicine (20); toilet supplies and services (5); amusements, recreation, vacation (12.5); laundry (30); daily and Sunday newspapers (5); carfare (15); and incidentals (12.5). In addition to this list, however, a constant was used to represent expenditures other than those specifically mentioned, such as insurance, club fees, charity and church donations, gifts, taxes, and expenses for further education.

The weights allotted to each of the major groups of expenditures in the total budget were: food, 25; rent, 20; clothing, 20; sundries (actually priced), 15; and sundries (constant), 20.

Prices were secured, upon the request of the Commissioner of Education of the State of New York and the cooperation of school superintendents, chiefly by high school students. A total of 139 communities received questionnaires, 103 returned information, but only 85 reported sufficient data to be used in the study.

[1] These weights represent the per cent of the total clothing budget assigned to each group.

TABLE 25: INDEXES OF THE COST OF LIVING OF TEACHERS IN NEW YORK STATE, BY COMMUNITIES

Base, Average for State = 100

(Source: Teachers College, Columbia University)

Rank in Total Index	Community	Total	Food	Rent	Clothing	Miscellaneous
1	Bronxville	126.1	110.7	198.0	100.5	124.9
2	Rochester	118.7	99.3	173.9	109.8	114.1
3.5	New Rochelle	117.3	111.2	162.9	99.5	113.5
3.5	New York City	117.3	107.0	169.1	98.6	113.6
5	Yonkers	116.3	107.3	162.4	99.0	114.4
6.5	Mount Vernon	115.2	108.5	161.3	99.0	106.9
6.5	Syracuse	115.2	98.3	169.8	106.6	102.6
8	Rockville Center	115.0	106.5	155.5	99.9	115.0
9	Hicksville	112.5	108.9	143.3	97.7	113.6
10	Freeport	108.9	106.6	125.3	97.7	117.9
11	Port Washington	107.3	115.3	113.4	99.0	106.3
12	Mineola	107.1	108.2	122.4	97.4	107.3
13	Lynbrook	106.9	109.2	121.6	98.6	103.9
14	Ossining	106.2	104.9	117.6	98.4	111.5
15	Binghamton	106.1	104.0	117.0	105.5	104.2
16	Roslyn	106.0	108.5	110.8	99.1	112.9
17	North Tarrytown	105.1	103.7	119.0	99.5	109.5
18	Hastings-on-Hudson	104.0	107.6	106.7	98.5	107.1
19	Northport	103.9	107.0	99.8	97.7	117.6
20	Hudson	103.8	104.1	110.5	98.4	106.9
21	Glen Cove	103.7	105.0	107.7	99.6	106.7
22	Poughkeepsie	103.5	101.5	112.8	98.1	106.4
23	Utica	103.4	100.3	112.2	103.1	101.9
24	Kingston	103.2	101.4	119.7	97.7	95.8
25	Jamestown	103.1	97.9	109.4	104.8	104.9
26	Peekskill	102.6	106.5	102.0	99.8	104.4
27	Port Jervis	102.5	100.6	108.3	98.0	107.3
28	Middletown	102.0	101.9	108.1	97.6	102.4
29	Huntington	101.9	107.9	92.4	98.1	112.2
30	Auburn	101.7	96.2	108.9	106.3	97.9
31	Amsterdam	101.6	101.6	120.3	91.5	92.3
32	Patchogue	101.5	104.1	102.7	99.2	100.7
33	Monticello	101.4	102.9	107.7	99.2	95.6
34.5	Newburgh	101.3	103.7	98.2	97.4	108.3
34.5	Schenectady	101.3	103.8	111.8	90.9	98.4
36.5	Olean	100.9	97.4	103.2	103.9	101.1
36.5	Saugerties	100.9	103.2	110.8	96.7	90.7
38	Cortland	100.8	96.7	98.2	106.1	105.4
39	Plattsburg	100.7	98.5	96.8	106.3	102.7
40	Elmira	100.6	95.6	110.7	97.2	100.5
41	Dunkirk	100.1	94.8	113.4	89.9	104.7
42	Oswego	99.7	99.8	95.4	107.5	94.3
43	Watervliet	99.0	101.7	98.2	97.6	96.3
44	Lackawanna	98.9	96.2	113.4	90.1	94.8
45	Niagara Falls	98.8	98.5	104.6	92.4	98.5

TABLE 25: INDEXES OF THE COST OF LIVING OF TEACHERS IN NEW YORK STATE, BY COMMUNITIES—(*Concluded*)

Base, Average for State = 100

Rank in Total Index	Community	Total	Food	Rent	Clothing	Miscellaneous
46	East Syracuse	98.3	100.0	90.7	107.0	91.6
47	Glens Falls	97.5	100.6	91.7	96.9	97.2
48.5	Lockport	97.3	94.6	104.3	90.6	97.6
48.5	Rome	97.3	99.6	84.0	103.0	99.7
50	Gloversville	97.2	98.5	93.9	91.7	103.1
51	Corning No. 9	96.5	95.2	91.5	96.6	100.8
52	Bath	96.1	89.3	89.9	97.2	109.2
53	East Rochester	95.9	98.0	77.5	109.1	94.1
54	Malone	95.7	98.1	84.2	105.8	87.7
55.5	Hoosick Falls	95.6	98.3	92.6	97.5	86.9
55.5	Salamanca	95.6	93.3	71.5	105.6	112.2
57	Oneida	95.5	98.4	77.6	101.7	100.5
59	Ogdensburg	95.3	94.3	79.3	106.2	97.3
59	Canandaigua	95.3	95.4	82.2	105.6	92.8
59	Batavia	95.3	94.3	83.9	107.9	89.3
61	Lancaster	95.2	95.8	93.3	91.0	96.0
62.5	Hornell	95.1	95.7	85.4	96.9	97.8
62.5	Whitehall	95.1	99.2	86.9	96.7	90.3
64	Owego	94.9	96.9	82.0	105.0	88.6
65.5	Ilion	94.8	99.2	66.5	102.8	107.9
65.5	Le Roy	94.8	93.6	83.6	107.3	88.3
68	Depew	94.2	93.3	100.6	90.5	84.4
68	Frankfort	94.2	98.7	68.0	103.2	101.7
68	Scotia	94.2	102.4	67.3	91.2	112.8
70	Carthage	93.8	94.7	78.2	104.3	91.0
71	Watkins	93.7	91.9	86.9	99.0	90.2
72	Johnstown	93.4	99.2	82.2	91.5	92.2
73.5	Fairport	93.2	95.0	70.8	108.8	90.4
73.5	Medina	93.2	93.7	79.3	105.9	84.9
75	Saratoga Springs	92.8	101.6	71.0	90.7	100.4
76	Massena	92.5	96.5	66.9	107.9	89.5
77	Tonawanda	92.4	95.2	84.6	91.9	88.8
78.5	Albion	91.9	92.2	72.5	106.2	87.5
78.5	Dansville	91.9	91.5	85.0	96.9	84.0
80	Herkimer	91.8	99.3	56.0	101.7	102.6
81	Corning No. 13	91.6	92.6	70.5	96.6	100.3
82	Penn Yan	90.9	92.7	79.3	96.7	83.7
83	Walden	90.8	97.6	68.0	98.4	87.3
84	Lowville	90.6	89.7	68.8	106.2	88.1
85	Gouverneur	90.4	92.5	71.8	104.6	80.0

For the computation of the indexes a simple average price was first obtained for each article in each community. The cost of each major item for each community was secured by multiplying each average price by its proper weight and adding these weighted prices within each of the four major groups of expenditures. The costs of each major group in all the communities were added and divided by eighty-five to obtain the average cost for the state as a whole. This state average cost formed the basis for computing each major item index for each community, i. e., the cost of each major item in each community was divided by the average cost for the state. After these indexes were obtained for each major item in each community, they were weighted by their corresponding weights and the constant added to secure the total cost of living index for each community. The formula for the index for each community was as follows: (25 × food index) + (20 × rent index) + (20 × clothing index) + (15 × sundries index) + 2000 (i. e., 20 × a constant index of 100).

The results thus secured are given in Table 25 for each community and for each group of expenditures. The communities are listed according to the magnitude of the total index.

It will be noted that a rather wide variation was found in living costs in the communities studied. Total living costs, on the basis of this survey, were found lowest in Gouverneur and highest in Bronxville; in the latter community they were 39% higher than in the former. The widest variations were found in rents, the rent indexes ranging from 56 in Herkimer to 198 in Bronxville; in other words, rents for single rooms in Bronxville were over 250% greater than in Herkimer. Less variation was found in the cost of food, the indexes of which ranged from 89.3 in Bath to 115.3 in Port Washington; that is, in the latter community food was 29% higher than in Bath. Clothing showed even less variation than food, ranging from 89.9 in Dunkirk to 109.8 in Rochester, a difference of only 22%. Expenditures for miscellaneous items showed a rather wide variation, ranging from 80.0 in Gouverneur to 124.9 in Bronxville, a difference of 56%.

Twelve Industrial Cities

The National Industrial Conference Board published in the early part of 1928 the results of a study conducted in 1927[1] which was designed to ascertain what differences, if any, existed in the cost of living according to a definite standard in twelve industrial cities.[2] The cities were selected in four states and were chosen to represent communities of different sizes, i. e., large, medium and small, and to meet such requirements as diversification of industry and a predominance of white native born inhabitants. The cities selected, in order of their size, were: New York, N. Y.; Philadelphia, Pa.; Cleveland, O.; Boston, Mass.; Syracuse, N. Y.; Dayton, O.; Springfield, Mass.; Reading, Pa.; Marion, O.; Butler, Pa.; Lockport, N. Y.; and Leominster, Mass.

The method used to measure the costs of living in the various cities was the adoption of a standard budget and the ascertainment of how much it would cost in each city to purchase the commodities and services listed in that budget in the quantities assigned to each. The budget adopted was based on available data regarding consumption habits, and was intended to represent a fair minimum standard of living for an American wage earner, his wife and two minor children. It will be noted that this budget did not take account of differences in local habits, except for housing, fuel and carfare. The purpose of the study was merely to measure the cost of maintaining a similar standard of living in each locality.

The total budget was composed of five major items—food, housing, fuel and light, clothing and sundries. The food budget, which represented the minimum requirements for one week of an industrial worker, his wife and two children under fourteen years of age, living at a "Fair American Standard," is reproduced on the next page.

The kinds and quantities of food allowed were determined on the basis of the number of calories required for persons of different ages and occupations, an effort being made to

[1] Except in New York City, where the investigation was conducted in 1926.

[2] National Industrial Conference Board, "The Cost of Living in Twelve Industrial Cities," New York, 1928.

	Quantity (in pounds)
Meat and fish	
Leg of lamb	3
Hamburger steak	1
Flank beef	⅔
Pork chops	1
Bacon	¼
Bologna sausage	⅔
Fresh fish	1
Dried codfish	⅔
Canned salmon	1
Dairy products	
Milk	11 qts.
Butter	1⅓
Oleomargarine	⅔
Lard	¼
Cheese	⅔
Eggs	1½ doz.
Vegetables	
Potatoes	1⅓ pk.
Carrots	2
Onions	2½
Cabbage	2½
Dried beans	1½
Canned tomatoes	No. 3 can
Cocoa	¼

	Quantity (in pounds)
Fruit	
Oranges	2 doz.
Bananas	½ doz.
Apples	4
Raisins	½
Prunes	1
Dried apricots	½
Bread, cereals, sugar	
White bread	11
Wheat flour	2
Corn meal	⅔
Rice	⅔
Macaroni	⅔
Rolled oats	2
Soda crackers	⅔
Granulated sugar	3
Syrup	½
Tea, coffee, etc.	
Tea	¼
Coffee	⅔
Condiments	[1]
Ice	[2]

[1] Food condiments included all flavors and seasonings which make food palatable but have little or no nourishment. An arbitrary amount was allowed for this item.

[2] One hundred pounds of ice per week allowed for eighteen weeks.

set up a well-balanced budget but one covering chiefly the less expensive foods. Housing accommodations priced were of the prevailing type commonly occupied by wage earners. The only specifications made in regard to rents were that the accommodations were to be at least four rooms, with a bath for the exclusive use of the family, and that at least a majority of the persons in the neighborhoods were to be American wage earners. Fuel and light included coal, kerosene, kindling wood, gas and electricity. Because of differences in the kinds and quantities of fuel used in the different cities, it was necessary to make adjustments in this item locally. The making up of a standard clothing list presented many difficulties, but after drawing on common observation and the experience and opinions of shopkeepers, one was adopted which contained 31 articles of men's clothing, 34 of women's clothing and 62 of children's clothing, as well as 12 items of yard goods, 4 shoe repairs and 3 cleaning and pressing ser-

vices. The quality specified was for "inexpensive but fair grades of merchandise," such as is usually purchased by wage earners. The complete clothing budgets are given below.

It will be noted that the children's articles of clothing priced refer to three ages. In the computations of the total cost, however, the cost of all these articles was determined, divided by three and multiplied by two, thus obtaining the cost for two "average" children.

The sundries group included expenditures for such items as transportation, recreation, reading material, medical care, insurance, organization dues, church, charity, gifts, candy,

Husband	
Items	Quantity Allowance
Suit	2/3
Overcoat	1/4
Extra trousers	1
Sweater	1
Madras shirt	2
Cotton work shirt	2
Wool work shirt	1
Overalls	3
Oxfords	1/2
High shoes	1/2
Work shoes	1
Rubbers	1/2
Wool socks	4
Cotton socks	4
Summer union suit	2
Winter union suit	1
Night clothes	2
Felt hat	1/2
Straw hat	1/2
Cap	1
Wool gloves	1/2
Work gloves	3
Collar	4
Tie	3
Garters	2
Belt	1/3
Suspenders	1
White handkerchief	4
Colored handkerchief	2
Umbrella	1/4
Half-soles and heels	2
Cleaning and pressing	1
Pressing suit	1
Incidentals	

Wife	
Items	Quantity Allowance
Coat	1/2
Sweater	1/2
Wool dress[1]	1/2
Silk dress[1]	1/2
Gingham dress[1]	1
Voile dress[1]	1
House dress[1]	2
Apron[1]	3
Cotton stockings	3
Wool stockings	2
Silk stockings	1
Muslin nightgown	1
Outing flannel nightgown	1
Corset	2
Brassiere	2
Cotton vest	2
Cotton bloomers	3
Winter union suit	2
Sateen dress slip	1
Cotton crepe kimono[1]	1/4
Summer hat	1
Winter hat	1/2
Chamoisette gloves	1/2
Wool gloves	1/2
Felt house slippers	1/3
Oxfords	1
Pumps	1
Rubbers	1/2
Umbrella	1/4
Handkerchief	6
Hand bag	1/3
Cleaning and pressing	1
Half-soles and heels	1 1/2
Heels	1
Incidentals	

[1] Prices obtained were for material of which garments are made; quantity used refers to finished garments.

Twelve Year Old Son

Items	Quantity Allowance
Mackinaw	½
Sweater	½
Two-trouser suit	1
Heavy cotton trousers	2
Shirt or blouse	4
Winter union suit	2
Summer union suit	2
Night clothes	2
Wool stockings	2
Cotton stockings	8
Oxfords	1
Sneakers	1
High shoes	2
Rubbers	1
Wool gloves	1
Winter cap	1
Summer hat	1
Necktie	2
Cotton handkerchief	6
Belt	½
Garters[1]	2
Half-soles and heels	3
Incidentals	

Eight Year Old Daughter

Items	Quantity Allowance
Coat	½
Sweater	½
Wool dress (with bloomers)[1]	1
Gingham dress (with bloomers)[1]	2
Voile dress (with slip)[1]	1
Bloomers	3
Winter union suit	2
Summer union suits	2
Night clothes	2
Underwaist	3
Wool stockings	2
Cotton stockings	5
Oxfords	1
Sneakers	1
High shoes	2
Rubbers	1
Wool gloves	1
Winter hat	1
Summer hat	1
Handkerchief	6
Garters[1]	2
Half-soles and heels	3
Incidentals	

Two Year Old Son

Items	Quantity Allowance
Knitted suit	½
Sweater	½
Rompers	3
Overalls	3
Summer undershirt	2
Winter undershirt	2
Muslin night clothes	1
Outing flannel night clothes	1
Cotton drawers	2
Wool drawers	2
Underwaist	2

Two Year Old Son

Items	Quantity Allowance
Cotton stockings	5
Cotton socks	3
Sandals	1
High shoes	2
Rubbers	1
Wool mittens	1
Winter cap	1
Summer hat	1
Garters	2
Half-soles and heels	2
Incidentals	

tobacco, cleaning supplies, toilet requisites, furniture and house furnishings. For some of these items the cost was definitely ascertained, for others a lump-sum allotment was made. In the case of transportation some adjustments had to be made to allow for differences in various cities in the extent to which means of transportation were necessary for the workers to go to and from work.

The results of this cost of living investigation are given below. Table 26 gives the actual total yearly and weekly costs for each one of the major items and for all items combined for each city, and Table 27 presents the yearly costs expressed as index numbers, with the lowest costs for each

[1] Prices obtained were for material of which garments are made.

major item and the total cost of living used as a basis. In other words, the lowest costs found in any city are taken as equal to 100 and the costs in other cities are expressed as percentages of the lowest costs.

TABLE 26: AVERAGE MINIMUM COST OF MAINTAINING A FAIR AMERICAN STANDARD OF LIVING FOR THE FAMILY OF AN INDUSTRIAL WORKER, HIS WIFE AND TWO CHILDREN IN TWELVE INDUSTRIAL CITIES

(Source: National Industrial Conference Board)

City	Total	Housing	Fuel and Light	Food	Clothing	Sundries
			Yearly Cost[1]			
Large Cities						
Boston, Mass.	$1,627.33	$360.00	$111.05	$573.04	$188.56	$394.68
Cleveland, Ohio	1,551.62	360.00	66.25	570.44	195.61	359.32
New York, N. Y.[2]	1,659.84	385.02	98.17	620.88	208.93	346.84
Philadelphia, Pa.	1,628.35	360.00	100.90	588.64	208.05	370.76
Medium Size Cities						
Dayton, Ohio	1,503.74	360.00	71.30	564.20	191.56	316.68
Reading, Pa.	1,618.26	369.96	108.45	591.24	196.57	352.04
Springfield, Mass.	1,568.80	300.00	127.60	578.76	204.16	358.28
Syracuse, N. Y.	1,601.52	360.00	115.20	576.68	212.16	337.48
Small Cities						
Butler, Pa.	1,449.35	312.00	54.06	589.68	202.93	290.68
Leominster, Mass.	1,458.21	240.00	123.00	602.68	196.65	295.88
Lockport, N. Y.	1,566.82	360.00	122.50	567.32	215.92	301.08
Marion, Ohio	1,441.96	314.04	69.53	556.40	200.91	301.08
			Weekly Cost[1]			
Large Cities						
Boston, Mass.	$31.30	$6.92	$2.14	$11.02	$3.63	$7.59
Cleveland, Ohio	29.83	6.92	1.27	10.97	3.76	6.91
New York, N. Y.[2]	31.92	7.40	1.89	11.94	4.02	6.67
Philadelphia, Pa.	31.31	6.92	1.94	11.32	4.00	7.13
Medium Size Cities						
Dayton, Ohio	28.91	6.92	1.37	10.85	3.68	6.09
Reading, Pa.	31.12	7.11	2.09	11.37	3.78	6.77
Springfield, Mass.	30.17	5.77	2.45	11.13	3.93	6.89
Syracuse, N. Y.	30.80	6.92	2.22	11.09	4.08	6.49
Small Cities						
Butler, Pa.	27.87	6.00	1.04	11.34	3.90	5.59
Leominster, Mass.	28.05	4.62	2.37	11.59	3.78	5.69
Lockport, N. Y.	30.13	6.92	2.36	10.91	4.15	5.79
Marion, Ohio	27.73	6.04	1.34	10.70	3.86	5.79

[1] The costs of housing, fuel and light, and clothing were computed on a yearly basis, and other items on a weekly basis; hence, the slight discrepancy between yearly and weekly totals.

[2] Computed by weighting costs for separate boroughs according to population.

TABLE 27: INDEXES OF THE AVERAGE MINIMUM COST OF MAINTAINING A FAIR AMERICAN STANDARD OF LIVING FOR THE FAMILY OF AN INDUSTRIAL WORKER, HIS WIFE AND TWO CHILDREN IN TWELVE INDUSTRIAL CITIES

Base, Lowest Cost of Each Item = 100

(Source: National Industrial Conference Board)

Total		Food		Housing	
City	Index	City	Index	City	Index
Marion	100.00	Marion	100.00	Leominster	100.00
Butler	100.51	Dayton	101.40	Springfield	125.00
Leominster	101.13	Lockport	101.96	Butler	130.00
Dayton	104.28	Cleveland	102.52	Marion	130.85
Cleveland	107.60	Boston	102.99	Boston	150.00
Lockport	108.66	Syracuse	103.64	Cleveland	150.00
Springfield	108.80	Springfield	104.02	Dayton	150.00
Syracuse	111.07	Philadelphia	105.79	Lockport	150.00
Reading	112.23	Butler	105.98	Philadelphia	150.00
Boston	112.86	Reading	106.26	Syracuse	150.00
Philadelphia	112.93	Leominster	108.32	Reading	154.15
New York	115.11	New York	111.59	New York	160.43

Clothing		Fuel and Light		Sundries	
City	Index	City	Index	City	Index
Boston	100.00	Butler	100.00	Butler	100.00
Dayton	101.59	Cleveland	122.55	Leominster	101.79
Cleveland	103.74	Marion	128.62	Lockport	103.58
Reading	104.25	Dayton	131.89	Marion	103.58
Leominster	104.29	New York	181.59	Dayton	108.94
Marion	106.55	Philadelphia	186.64	Syracuse	116.10
Butler	107.62	Reading	200.61	New York	119.32
Springfield	108.27	Boston	205.42	Reading	121.11
Philadelphia	110.34	Syracuse	213.10	Springfield	123.26
New York	110.80	Lockport	226.60	Cleveland	123.61
Syracuse	112.52	Leominster	227.52	Philadelphia	127.55
Lockport	114.51	Springfield	236.03	Boston	135.78

The largest difference in total living costs among these twelve cities amounted to 15%, the lowest costs being found in Marion, and the highest in New York. The greatest variation in the cost of the separate items was for fuel and light, which showed a difference of 136% between the high and low costs. This difference was particularly due to variation in the price of coal. The differences in the rent levels amounted to 60%, and in sundries to 36%. The smallest variations were found in food and clothing prices, amounting to 12% and 15%, respectively. While there are some striking

differences in the cost of the major groups in the various cities, these differences tend to disappear somewhat when the total cost is obtained, due to the fact that high costs of some items in a given city may be balanced by low costs of other items. The costs do not balance each other altogether, however, as slight differences in the total costs were noted for the various cities, as is shown in Table 26.

Massachusetts Towns

Studies conducted in several Massachusetts towns[1] by the Massachusetts Special Commission on the Necessaries of Life may also be mentioned. The indexes for the various towns were constructed in the same manner as the index the Commission computes regularly for Massachusetts as a whole[2], namely, retail prices were obtained for a definite list of commodities and services and to these were applied the weights. The general average for the state as a whole was taken as the basis of comparison in order to indicate to what extent living costs in these towns varied from the average.

Town	Date	Local Index	Massachusetts Index
Northampton	Feb.–Mar., 1929	98.17	100
Holyoke	July–Aug., 1929	96.40	100
Pittsfield	Oct., 1929	101.63	100
Greenfield	Feb., 1930	100.80	100

These figures may be compared only horizontally and not vertically, because of differences in the dates on which the surveys were made. For example, the indexes show that living costs in Greenfield were slightly less than 1% higher than in Massachusetts as a whole. The widest variation from the base average was noted in Holyoke, where costs were 3½% lower than the state average. On the whole, therefore, little variation in living costs has been found as a result of the studies in the four cities.

[1] Commonwealth of Massachusetts, Special Commission on the Necessaries of Life, Special Releases.

[2] For method of construction, see, National Industrial Conference Board, "The Cost of Living in the United States, 1914–1926," New York, 1926, pp. 87–101.

Social Groups

Studies which aim to throw light on differences in living costs among various social groups and also on differences in living standards have been carried on by a number of authorities in recent years.

Federal Employees in Five Cities

A study which presents valuable data on many aspects of family expenditures is one made in the summer of 1928 by the United States Bureau of Labor Statistics, in cooperation with the Personnel Classification Board. Its object was to obtain information regarding the income and living expenses of the average married government employee outside of Washington. For this purpose a study was made of the incomes and expenditures of 506 families of federal employees in five cities—Baltimore, Boston, Chicago, New Orleans and New York.

The families were limited to those of male workers who had been in the employment of the Federal Government for one year or longer, who were married and living with their wives, and who had at least one dependent. A further restriction was made with regard to the salary of the male head of the family, which was not to exceed $2,500 in the year ending June 30, 1928, without regard to retirement deduction and exclusive of any other income. These employees included laborers, watchmen, engineers, inspectors, guards, clerks and accountants, and technical workers in the lower salary groups. Postal employees were not included. A few colored employees were included in the group studied.

To obtain the necessary information, women agents of the United States Bureau of Labor Statistics visited the families and questioned them regarding their income and expenditures. Some families had fairly good records, others only fragmentary ones, while many had no records whatsoever and memory had to be relied on to a greater or less degree in furnishing the necessary data. The information was recorded on schedules, and as a check to its accuracy a statement was obtained as to the year's surplus or deficit.

The Bureau has published a number of interesting tables

compiled from the data obtained. These figures are enlightening both as to income and expenditures of the social group studied. Moreover, they give valuable information about home ownership and instalment buying. It is impossible to reproduce here all of the material in this summary. Readers interested in the various phases of the study can readily obtain the data from the *Monthly Labor Review*.[1] Some of the figures pertinent to expenditures are reproduced in full. Other material given here, while based on that published by the Bureau of Labor Statistics, has been computed or arranged in different form by the National Industrial Conference Board.

Table 28 gives the number of families represented in each city and the composition of the average family, which was found to be more than four and a half but less than five persons.

TABLE 28: AVERAGE COMPOSITION OF FAMILIES OF FEDERAL EMPLOYEES IN FIVE CITIES

(Source: U. S. Bureau of Labor Statistics)

	Baltimore	Boston	Chicago	New Orleans	New York
Number of families	96	102	102	105	101
Average persons per family:					
Husband	1.0	1.0	1.0	1.0	1.0
Wife	1.0	1.0	1.0	1.0	1.0
Children	2.1	2.1	2.1	2.0	2.3
Other dependents	0.04	0.04	0.2	0.1	0.03
Boarders	0.4	0.4	0.4	0.5	0.4
Lodgers	0.2	0.1	0.1	0.01	0.1
Total	4.7	4.6	4.8	4.6	4.8

In Table 29 are presented the average government salary of the husband, the average income per family and the average actual total expenditures per family for each of the five cities. The expenditures for each major item are given in percentage form. By applying these percentages to the actual total expenditures, the absolute expenditures for each major item can be obtained. These figures are classified according to the government salary of the husband. It must be remembered, however, that the government salary did not

[1] Issues of August through October, 1929.

TABLE 29: INCOMES AND EXPENDITURES OF 506 FAMILIES OF FEDERAL EMPLOYEES IN FIVE CITIES

(Source: U. S. Bureau of Labor Statistics. Computed by National Industrial Conference Board)

Government Salary of Husband	Average Government Salary of Husband	Average Income of Family	Average Family Expenditures	Per Cent Spent for: Food	Clothing	Housing	Heating and Lighting	Furniture and Furnishings	Other Items
Baltimore									
Under $1,200	$1,118.00	$1,483.34	$1,625.63	33.8	11.3	24.1	6.1	3.3	21.4
$1,200 to 1,499	1,285.77	1,597.09	1,741.47	34.7	10.1	24.4	7.1	1.9	21.8
1,500 to 1,799	1,585.26	2,202.91	2,202.22	28.1	11.7	23.6	5.9	4.1	26.6
1,800 to 2,099	1,935.20	2,434.05	2,667.06	30.1	12.8	22.2	5.9	3.5	25.5
2,100 to 2,399	2,222.91	3,031.33	3,011.26	27.4	13.0	20.9	5.6	3.9	29.2
2,400 to 2,500	2,457.14	2,764.00	2,870.25	27.4	13.9	19.8	5.8	4.0	29.1
Average of all groups	$1,796.86	$2,336.87	$2,434.93	29.4	12.4	22.2	6.0	3.6	26.4
Boston									
Under $1,200	$1,140.00	$1,722.73	$1,843.48	40.1	14.1	12.8	6.7	5.7	20.6
$1,200 to 1,499	1,326.22	2,001.62	2,079.54	33.9	11.4	18.9	6.8	2.6	26.4
1,500 to 1,799	1,659.38	2,249.74	2,391.35	35.3	10.9	20.4	6.5	2.1	24.8
1,800 to 2,099	1,908.07	2,478.12	2,564.11	32.7	10.5	20.6	6.4	3.2	26.6
2,100 to 2,399	2,184.24	2,744.76	2,902.89	29.7	12.4	20.6	6.5	2.5	28.3
2,400 to 2,500	2,413.20	3,045.20	2,905.32	28.7	11.8	19.8	5.9	1.6	32.2
Average of all groups	$1,809.42	$2,411.31	$2,498.12	32.5	11.3	20.0	6.5	2.6	27.1
Chicago									
Under $1,200	$1,140.00	$2,282.50	$1,982.84	29.8	10.4	23.0	10.2	3.5	23.1
$1,200 to 1,499	1,293.42	2,028.64	2,186.19	31.2	12.0	21.1	6.3	3.5	25.9
1,500 to 1,799	1,670.41	2,610.29	2,690.83	28.3	11.2	23.9	5.4	3.6	27.6
1,800 to 2,099	1,890.51	2,820.75	3,067.87	27.2	11.5	19.8	5.5	3.5	32.5
2,100 to 2,399	2,194.93	2,939.96	3,032.44	27.2	10.6	21.7	5.8	3.7	31.0
2,400 to 2,500	2,419.81	3,191.37	3,542.94	27.3	12.6	20.1	5.1	2.8	32.1
Average of all groups	$1,878.96	$2,745.87	$2,928.41	27.8	11.5	21.0	5.7	3.4	30.6
New Orleans									
Under $1,200	$1,055.25	$1,516.93	$1,524.85	39.1	12.3	14.5	3.3	4.7	26.1
$1,200 to 1,499	1,320.30	1,744.15	1,820.89	38.1	10.4	17.0	4.1	2.7	27.7
1,500 to 1,799	1,623.04	2,064.45	2,288.22	34.5	11.1	14.9	3.8	3.4	32.3
1,800 to 2,099	1,910.29	2,455.10	2,644.45	32.3	11.4	15.2	3.6	3.0	34.5
2,100 to 2,399	2,221.11	2,830.81	2,728.08	32.5	12.0	16.9	3.8	3.4	31.4
2,400 to 2,500	2,400.00	2,804.18	2,698.85	30.1	11.7	16.3	4.1	3.8	34.0
Average of all groups	$1,704.56	$2,193.98	$2,279.96	34.2	11.4	15.8	3.8	3.3	31.5
New York									
Under $1,200	$1,140.00	$2,066.37	$2,056.75	40.2	13.6	19.0	6.4	3.0	17.8
$1,200 to 1,499	1,325.20	1,850.32	2,015.60	34.5	10.7	22.0	5.2	1.6	26.0
1,500 to 1,799	1,628.08	2,434.97	2,523.61	37.1	11.7	19.3	4.7	1.8	25.4
1,800 to 2,099	1,912.82	2,588.14	2,697.45	36.1	12.4	17.2	4.5	2.2	27.6
2,100 to 2,399	2,181.86	2,708.71	2,741.11	36.9	12.1	18.8	4.5	1.8	25.9
2,400 to 2,500	2,421.00	3,059.41	3,350.13	30.2	10.4	18.5	3.5	1.4	36.0
Average of all groups	$1,812.07	$2,483.36	$2,598.45	35.7	11.7	18.7	4.6	1.9	27.4

TABLE 30: INCOMES AND EXPENDITURES OF 506 FAMILIES OF FEDERAL EMPLOYEES IN FIVE CITIES COMBINED

(Source: U. S. Bureau of Labor Statistics. Computed by National Industrial Conference Board)

Government Salary of Husband	Average Government Salary of Husband	Average Income of Family	Average Family Expenditures	Absolute Expenditures						Relative Expenditures (Per Cent)					
				Food	Clothing	Housing	Heating and Lighting	Furniture and Furnishings	Other Items	Food	Clothing	Housing	Heating and Lighting	Furniture and Furnishings	Other Items
Under $1,200	$1,101.34	$1,683.67	$1,699.99	$618.68	$204.61	$326.33	$99.19	$66.18	$385.00	36.39	12.04	19.20	5.83	3.89	22.65
$1,200 to 1,499	1,313.54	1,848.42	1,963.29	681.43	215.12	394.85	113.92	48.53	509.44	34.71	10.96	20.11	5.80	2.47	25.95
1,500 to 1,799	1,632.51	2,300.43	2,413.12	800.13	272.57	484.95	125.83	70.39	659.25	33.16	11.29	20.10	5.21	2.92	27.32
1,800 to 2,099	1,909.42	2,581.22	2,755.16	863.96	323.01	525.51	143.66	85.86	813.16	31.36	11.72	19.07	5.22	3.12	29.51
2,100 to 2,399	2,203.43	2,863.37	2,888.61	876.22	350.21	573.36	152.66	90.79	845.37	30.33	12.12	19.85	5.29	3.14	29.27
2,400 to 2,500	2,421.61	3,026.14	3,174.00	904.48	382.15	612.03	154.86	80.55	1,039.93	28.50	12.04	19.28	4.88	2.54	32.76
Average of all groups.....	$1,799.82	$2,433.91	$2,547.63	$810.64	$297.24	$499.06	$134.74	$75.46	$730.49	31.82	11.67	19.59	5.29	2.96	28.67

constitute the sole income of these families. In order to obtain average expenditures of these families for all cities combined a weighted average[1] of the figures has been computed by the Conference Board and is presented in Table 30. For convenience, these figures have also been computed on a percentage basis.

These tables throw light not only on the average actual expenditures of these families but also on the relative expenditures for each major group of living necessities. Moreover, they permit a comparison of differences in expenditures among the various cities as well as differences noted among the various salary groups. The figures bear out the generally accepted theory that as the income increases, the proportion spent for food tends to decrease and that spent for sundries tends to increase.

The Bureau has also published detailed figures concerning food consumption, both as to quantities and costs for each city and for the five cities combined. For all cities combined these figures have also been separated according to salary groups. Space is lacking to present these tables here, but the Conference Board has taken one table showing the actual cost of specified articles of food in each city and the five combined, and has converted these costs into percentages in order to show the relative expenditures for each of these chief articles of food consumption. These figures are found in Table 31. Without exception, the largest expenditure in the family budget in each city was for meat. In all cities combined the average expenditure for this item amounted to 15% of the total outlay for food. The second largest expenditure was for milk, amounting to 10%. Other important items in the food budget were the following, listed in the order of expenditure: lunches and other meals bought outside, fresh vegetables (excluding potatoes), bread and rolls, butter and substitutes, eggs, fresh fruit, poultry, and salted meats. Expenditures for these commodities ranged from 8% to 4% of the total food costs.

Few adequate data are available in regard to family expenditure other than for food, housing, clothing, fuel and light—in other words, for the "miscellaneous" expenditures.

[1] Weighted by number of families in each city within each group.

TABLE 31: AVERAGE EXPENDITURE PER FAMILY FOR SPECIFIED ARTICLES OF FOOD, FEDERAL EMPLOYEES IN FIVE CITIES, EXPRESSED AS PERCENTAGE OF TOTAL FOOD COST

(Source: U. S. Bureau of Labor Statistics. Computed by National Industrial Conference Board)

Item	Baltimore	Boston	New York	Chicago	New Orleans	Five Cities Combined
Meat, fresh (including cooked)	16.29	15.38	15.39	14.51	11.64	14.61
Meat, salt (including cooked)	5.93	4.41	2.05	4.05	3.81	3.93
Poultry, fresh	3.54	3.91	5.36	2.65	3.96	3.93
Meats and poultry, canned	0.08	0.03	0.02	0.04	0.10	0.05
Fish and other sea food, fresh or canned	3.12	3.37	3.13	2.22	3.12	2.99
Eggs	5.84	7.13	5.49	5.03	4.33	5.56
Milk, fresh	9.48	11.25	11.40	9.61	7.58	9.93
Cream, fresh	0.27	0.52	0.29	1.21	0.09	0.48
Milk, condensed and evaporated	1.01	0.81	0.83	0.77	2.71	1.22
Butter and substitutes	6.26	6.88	6.20	6.62	5.00	6.19
Sugar	2.10	2.14	1.48	1.80	2.11	1.91
Lard and substitutes	1.61	1.13	0.87	1.08	1.91	1.29
Flour and meal	1.60	2.06	0.80	1.63	1.24	1.45
Bread and rolls	7.69	4.54	7.06	5.42	7.30	6.37
Breakfast foods[1]	1.46	1.35	1.18	1.53	1.40	1.38
Potatoes	2.72	2.47	2.10	2.36	2.07	2.32
Other vegetables, fresh	7.14	6.67	6.92	6.86	6.22	6.76
Other vegetables, dried and canned	2.43	2.49	2.32	3.19	2.79	2.64
Fruits, fresh	4.96	5.09	5.26	6.09	5.96	5.48
Fruits, dried and canned	1.29	1.68	1.76	2.30	1.54	1.73
Coffee, tea, cocoa, etc.	3.50	3.32	3.15	3.75	4.14	3.56
Ice	2.60	2.36	1.55	2.44	3.82	2.52
Other food[2]	4.65	4.30	6.82	6.06	7.77	5.99
Lunches and meals bought	4.43	6.71	8.57	8.78	9.39	7.71
Total	100.00	100.00	100.00	100.00	100.00	100.00

[1] Includes corn flakes, hominy grit, rolled oats, etc.

[2] Includes ice cream, cornstarch, cheese, crackers, cakes, pies, macaroni, rice, tapioca, candy, jellies, peanut butter, gelatin, canned soup, pickles, baking powder, nuts, etc.

The data obtained by the Bureau in this connection are therefore a welcome addition to the literature on the subject of living costs. In Table 32 are presented the average relative amounts spent by the families surveyed for many of the miscellaneous items, expressed as percentages of the total budget. While slight departures were noted in the individual cities, the averages for the five cities combined reveal that the largest expenditure in this group was for health, which accounted for nearly 4½% of the total family expend-

Chart 9: Average Percentage Distribution of Expenditure for Specified Articles of Food by Federal Employees

(Source: U. S. Bureau of Labor Statistics. Computed by National Industrial Conference Board)

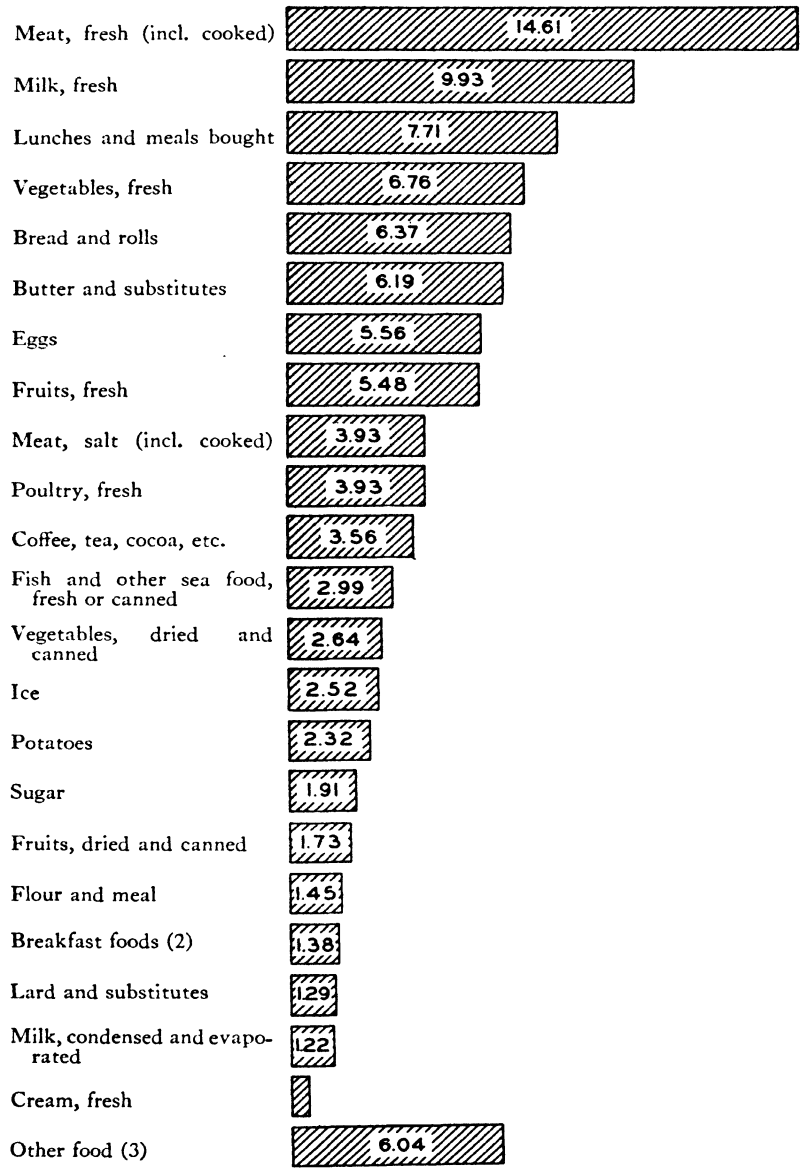


TABLE 32: AVERAGE EXPENDITURE PER FAMILY FOR SPECIFIED MISCELLANEOUS ITEMS, FEDERAL EMPLOYEES IN FIVE CITIES, EXPRESSED AS PERCENTAGE OF TOTAL BUDGET

(Source: U. S. Bureau of Labor Statistics. Computed by National Industrial Conference Board)

Item	Baltimore	Boston	Chicago	New Orleans	New York	Five Cities Combined
Health expense	3.10	4.87	4.74	4.35	4.92	4.43
Life, accident, and health insurance	3.96	3.80	3.68	3.27	4.08	3.76
Retirement deduction	2.15	2.20	1.92	2.38	2.10	2.14
Personal property insurance	0.11	0.08	0.07	0.22	0.09	0.11
Personal property and poll taxes	0.06	0.11	0.05	0.11	..	0.07
Church and Sunday school	0.85	1.35	0.84	0.80	0.90	0.95
Labor organizations	0.07	0.09	0.08	0.08	0.05	0.07
Lodges, clubs, and societies	0.28	0.30	0.30	0.44	0.35	0.33
Street-car fares	2.30	3.03	2.60	2.37	2.06	2.48
Automobile payments	1.02	0.39	2.09	1.39	0.38	1.08
Automobile supplies and repairs	1.32	0.72	1.37	1.69	0.24	1.06
Motorcycle supplies and repairs	0.02	..	..	..	..	[1]
Telephone	0.65	0.94	0.88	0.97	0.70	0.83
Laundry	1.03	0.89	1.08	2.12	1.50	1.31
Barber and beauty shop	0.85	0.76	0.81	0.81	0.85	0.81
Tobacco	1.11	0.92	0.87	1.23	1.15	1.05
Papers, magazines, and books	0.74	0.91	0.91	0.93	0.83	0.86
Radio	0.81	0.24	0.91	0.24	0.71	0.60
Motion pictures and other amusements	1.05	0.93	1.28	1.99	1.51	1.35
Vacation	0.67	0.85	0.86	0.89	1.42	0.94
Household incidentals	1.15	1.10	1.33	1.74	1.38	1.34
Music, dancing, and elocution lessons	0.15	0.22	0.16	0.12	0.11	0.15
School tuition and tutors' fees	0.28	1.01	0.35	0.39	0.51	0.51
Servant hire	0.56	0.11	0.30	0.90	0.16	0.39
Gifts, outside the home	0.76	0.38	0.80	0.86	0.75	0.71
Charity	0.10	0.06	0.06	0.30	0.04	0.11
Garage rent	0.28	0.20	0.27	0.03	0.13	0.19
Death expense	0.22	0.05	0.34	0.20	0.18	0.20
Traveling expense	0.22	0.06	0.12	0.06	0.04	0.10
Moving expense	0.08	0.05	0.17	0.07	0.05	0.09
Other items	0.47	0.47	1.38	0.58	0.21	0.65
Total	26.42	27.09	30.62	31.53	27.40	28.67

[1] Less than one-hundredth of one per cent.

itures, closely followed by expenses for insurance, which amounted to nearly 4%. Street-car fares were the next important item of expenditures, consuming 2½% of the total living expenses. Retirement deductions of these federal employees amounted to slightly over 2%. Automobile

payments and supplies also amounted to over 2%. Other miscellaneous expenditures which required between 1% and 1½% of the total budget were amusements, household incidentals, laundry and tobacco. The other expenditures in the sundries group amounted to less than 1% each.

Professional Persons in California

A study of the living costs of professional persons has been made in California by the Heller Committee for Research in Social Science of the University of California in response to a request from the California State Civil Service Commission in 1920 asking "What are satisfactory standards of living for state employees, and what do such standards cost?" The Committee made several cost of living studies to provide answers to these questions. The results published in 1923 referred to living costs of laborers, clerks and so-called "executives," the latter represented by heads of departments in the service of the state of California. Until the winter of 1925–1926 the same items and quantities were included in the budget. In each investigation prices were obtained in several retail stores in San Francisco for each one of the articles, and by applying the specified quantities to the prices the new costs were ascertained. It was felt then, however, that changes had taken place in consumption habits and that it would be desirable to obtain new information. Accordingly, groups of housewives representative of the three social groups mentioned above were requested to prepare the necessary information. Such data, however, were secured only from a group of wives of professional men. These housewives were given forms on which were listed the articles that families use, and were requested to make a quantity estimate of the goods and services which they considered that women of their standard of consumption required annually. Twenty-five of these forms were filled out and an average was taken of each item mentioned in a majority of the forms. To each average quantity was then applied the average price of the item in November, 1925. This process resulted in an estimated annual requirement of about $10,000, which was considerably in excess of the incomes of the families surveyed. This study, therefore, did not ac-

curately reflect actual annual expenditures. The Committee felt, however, that the quantities listed appeared to be the best available record of the "spending objectives" of women of this type. Since the chief aim of the Heller Committee was to determine the items and quantities of a standard of living, this quantity estimate, it was believed, "showed the standard of living of these housewives if not their actual plane of living."[1] This estimate was therefore used, with certain modifications, and the data presented below represent a quantity and cost estimate that is a "compromise between a rather high scale of wants on the one hand and the prevailing earning power of the average successful professional man on the other." It applies to the San Francisco Bay District in November, 1927. The total annual cost, it will be noted, is $6,500. The total annual costs for each major group of expenditures and for all combined, in absolute as well as relative figures, are given in Table 33. Detailed data are presented in Table 34.

TABLE 33: ABSOLUTE AND RELATIVE EXPENDITURES FOR EACH MAJOR ITEM AND THE TOTAL COST OF LIVING, FAMILIES OF PROFESSIONAL MEN IN SAN FRANCISCO

(Source: Heller Committee for Research in Social Economics, University of California)

Item	Annual Cost		Per Cent of Total Cost
Food		$1,043.28	16.0
Clothing		893.44	13.7
Man	$237.31		3.6
Wife	424.83		6.5
Children	231.30		3.6
Housing		1,343.30	20.7
House operation		991.98	15.3
Miscellaneous		2,228.00	34.3
Total		$6,500.00	100.0

Typographers' Families in California

Another study made by the Heller Committee for Research in Social Economics was one concerning incomes and

[1] Heller Committee for Research in Social Economics of the University of California, "Cost of Living Studies, Quantity and Cost Estimate of the Standard of Living of the Professional Class," University of California Publications in Economics, Vol. 5, No. 2, Berkeley, Cal., 1928, pp. 129–160.

TABLE 34: AVERAGE EXPENDITURE FOR SPECIFIED ARTICLES AND

(Source: Heller Committee for Research in Social Economics, University

Item	Annual Cost	
Food		
Meals at home		$893.28
Meat and fish	$231.48	
Milk	93.60	
Eggs	56.76	
Flour and bread	48.96	
Other cereals	31.44	
Vegetables	75.84	
Fruit	74.52	
Butter	72.60	
Other oils and fats	24.00	
Sugar	21.00	
Coffee, tea	44.88	
Sundries	118.20	
Meals away from home		
Husband's lunches—6 days a week, 50 weeks at $0.50		150.00
Clothing		
Man		
Formal		23.46
Full dress suit	5.00	
Tuxedo	3.67	
Shoes	3.33	
Socks, silk	1.50	
Shirts, pleated bosom	1.75	
Shirts, stiff bosom	1.75	
Collars	0.50	
Ties, black bow	0.75	
Ties, white bow	0.75	
Muffler	1.13	
Vests, white	1.33	
Vests, black	2.00	
Business clothing		164.26
Hats, felt	7.50	
Hats, straw	3.50	
Overcoat	16.67	
Suits	65.00	
Shoes	17.00	
Socks, lisle	3.00	
Socks, wool mixed	1.50	
Shirts, neckband	10.00	
Shirts, negligee	5.00	
Collars, soft	2.00	
Collars, starched	1.00	
Ties, four-in-hand	12.00	
Handkerchiefs	4.50	
Suspenders	1.00	
Belts	0.75	
Garters	1.00	
Gloves	4.00	
Underwear		
Athletic unions	6.00	
Umbrella	1.17	
Bill fold	1.67	
Sport wear		13.42
Cap	0.83	
Sweater	2.17	
Extra trousers, knickers	2.67	
Extra trousers, khaki	0.92	
Boots	3.33	
Golf socks	3.50	
House wear		7.42
Bathrobe	1.42	
Pajamas	5.00	
House slippers	1.00	
Upkeep		28.75
Cleaning suits	18.00	
Pressing suits	6.75	
Blocking hats	1.00	
Half-soles and heels	3.00	

Item	Annual Cost	
Wife		
Formal		$188.75
Hats	$ 7.50	
Coats	42.50	
Dresses, dinner	25.00	
Dresses, afternoon	39.50	
Dresses, evening, formal	25.00	
Slippers	22.00	
Stockings	7.80	
Underwear, costume slips, silk	5.95	
Underwear, brassieres	2.50	
Handkerchiefs	1.50	
Gloves, kid	4.50	
Bags	5.00	
Street wear		154.13
Hats	15.00	
Coats[1]	25.00	
Furs	9.83	
Dresses	29.50	
Shoes	17.00	
Rubbers, toe	0.50	
Stockings	11.70	
Underwear		
Costume slips	5.95	
Corset or equivalent	7.50	
Vests, glove silk	3.75	
Vests, rayon	1.43	
Bloomers, glove silk	5.90	
Bloomers, rayon	3.90	
Brassieres	3.00	
Sanitary apron	1.00	
Gloves, fabric	3.50	
Handkerchiefs	3.00	
Purse	5.00	
Umbrella, silk	1.67	
Sport or country wear		43.50
Hats	7.50	
Sweaters	2.50	
Frocks	22.50	
Oxfords	8.50	
Scarf	2.50	
House wear		13.95
Work dresses	3.90	
Aprons, cotton	1.50	
Bathrobe, wool or corduroy	1.49	
Kimono, silk	2.19	
Bedroom slippers	0.97	
Nightgowns	3.90	
Incidentals		12.00
Upkeep		12.50
Cleaning	10.50	
Half-soles and heels	1.50	
New heels	0.50	
Boy of 11		
Dress clothes		44.50
Cap	2.50	
Overcoat	10.00	
Suit	10.00	
Shirts	4.00	
Ties	1.50	
Shoes, low	12.00	
Socks, three-quarter wool	4.50	
School		51.00
Rubber rain hat	0.50	
Raincoat	2.00	
Sweater	5.00	
Cords	6.00	
Shirts	7.50	
Ties	1.50	
Underwear, athletic unions	4.00	
Shoes, school	10.00	
Shoes, tennis	4.50	

[1] Includes sport coats.

[2] Made at home.

Services, Families of Professional Men in San Francisco

of California. Arranged by National Industrial Conference Board)

Item	Annual Cost		Item	Annual Cost	
Shoes, rubbers	$ 1.25		Ice		$28.00
Socks	3.00		Telephone, single party line		42.00
Handkerchiefs	3.00		Tolls and telegrams		6.00
Garters	0.75		Garbage removal		9.00
Belts	2.00		House cleaning supplies		19.98
Play, overalls		$3.00	Laundry soap	$4.68	
Night clothes		7.42	Washing powder	4.20	
Bathrobe	1 67		Ammonia	0.75	
Bedroom slippers	1.75		Cleansers	1.80	
Pajamas	4.00		Soap flakes	3.00	
Upkeep		9.75	Furniture polish	0.60	
Cleaning	3.75		Silver polish	0.50	
Half-soles and heels	6.00		Floor wax	1.95	
Girl of 5			Disinfectant	1.50	
Dress clothes		50.66	Miscellaneous supplies	1.00	
Hats, winter	2.98		Personal cleaning supplies		30.00
Hats, summer	3.95		Soap	5.00	
Coats, summer, reefer	4.48		Toothbrushes	6.00	
Coats, winter	7.50		Toothpaste	5.60	
Party frocks[2]	7.50		Mouthwash	1.65	
Dresses[2]	6.00		Combs	1.75	
Shoes, party slippers	10.00		Brushes	2.25	
Socks, silk	2.25		Cleaning fluid	1.40	
Underwear, drawers	2.50		Shoe brush	0.25	
Underwear, slips[2]	3.50		Shoe polish	0.60	
Kindergarten		56.52	Shoe cleaner	0.50	
Sweaters	7.90		Miscellaneous bathroom supplies	5.00	
Raincoat with hat	2.97		Stationery and postage		12.00
Rubbers	0.85				
Dresses[2]	12.00				
Shoes	16.00				
Socks	4.00				
Underwear, unions	5.00				
Underwear, waists	1.50				
Underwear, bloomers[2]	3.90				
Garters	0.60				
Handkerchiefs	1.80				
Nightclothes		6.75			
Nightgowns	3.75				
Bathrobe	1.75				
Slippers	1.25				
Half-soles and heels		1.70			
Housing			*Miscellaneous*		
Instalments and interest		959.40	Savings and life insurance		620.00
Taxes		237.90	Savings	360.00	
Repairs		80.00	Life insurance	260.00	
Water		30.00	Automobile		382.48
Fire insurance		16.00	Upkeep	300.00	
Garden[3]		20.00	Insurance	68.50	
			Tax	10.98	
House operation			License	3.00	
Service		300.00	Medical care		275.00
Cleaning and laundry	200.00		Recreation		219.40
Extra cleaning, window washing, etc.	15.00		Theatre	19.80	
Gardener	10.00		Concert	16.00	
Care of children	75.00		Movies	15.60	
Laundry sent out		78.00	Opera	5.00	
Replacement of furniture and furnishings		250.00	Football	10.00	
Furniture	140.00		Other commercial amusements	10.00	
Kitchen furniture	10.00		Vacation, camping in a rented cottage	125.00	
Kitchen utensils	10.00		Records for phonograph or upkeep of radio	18.00	
Electrical equipment	20.00		Education		136.80
Linens and bedding	50.00		School supplies	5.00	
China	17.50		Private lessons, music	96.00	
Cleaning and laundry equipment	2.50		Daily papers, morning	13.80	
Fire insurance on furniture		8.00	Periodicals	12.00	
Light, heat and fuel		209.00	Books	10.00	
Electricity	42.00		Gifts		125.00
Gas	72.00		Social entertainment		123.00
Other fuel, heating	95.00		Dinners	60.00	
			Luncheons	30.00	
			Bridge parties	24.00	
			Informal Sunday teas	9.00	
			Charity		60.00
			Incidentals		60.00
			Tobacco		54.00
			Church		50.00
			Barber and cosmetics		46.32
			Barber	34.95	
			Cosmetics	6.50	
			Shaving upkeep	4.87	
			Carfare		40.00
			Organization dues		36.00

[3] Gardener charged to service.

expenditures of 82 typographers' families in San Francisco.[1] The investigation was begun in 1921, but for a number of reasons results were not published until the latter part of 1929. The data were collected during the period from September 15 to November 15, 1921, by representatives of the Committee. Equipped with definite schedules, these representatives questioned each one of the 82 families in regard to their incomes and expenditures during the previous twelve months. The families thus surveyed represented, according to the Committee's statement, "a fairly homogeneous number of settled American middle-aged families . . . a group whose nationality was American, whose families included characteristically not more than two children, and whose age was the period of life when the worker is best able to earn and save, the 'peak' period of earning power."[2] The earning power of this group of workers was relatively high and for the most part the families were dependent on the husband's earnings, although in a few cases additional incomes were reported from the wife or some other source.

The information requested may be noted from the questionnaire, which is reproduced on the next page.

The results of this investigation have been averaged for all of the 82 families, and separate averages were compiled which included only those families that reported expenditures for the particular items and whose returns were sufficiently complete. Since both methods have their advantages, the results of both are given below. The first method shows in general (overlooking the fact that some of the returns were incomplete) how a given number of families spent their incomes, regardless of whether or not all of these families reported expenditures for each item listed. These figures, therefore, indicate to some degree the standard of living of this group. The second method shows the importance of each one of the items mentioned among the families that actually make such expenditures.

[1] Heller Committee for Research in Social Economics of the University of California, Cost of Living Studies, II, "How Workers Spend a Living Wage, A Study of Incomes and Expenditures of Eighty-two Typographers' Families in San Francisco," by Jessica B. Peixotto, University of California Press, Berkeley, Cal., 1929.

[2] *Ibid.*, p. 171.

- Summary of income:
  - Earnings: Man
    - Wife
    - Children
    - Others
  - Board and lodging
  - Gifts, money, food, clothing, etc.
  - Net from rent, interests, etc.
  - Net from garden, chickens, etc.
  - Other

- Estimated expenses:
  - Food (per week)
    - Meals provided at home:
      - Bread
      - Butter
      - Eggs
      - Milk
      - Dry groceries
      - Fruit and vegetables
      - Meat, fish and poultry
    - Meals bought
  - Clothing (replacement, upkeep per year)
    - Man
    - Wife
    - Children
  - Housing (per year):
    - Rent charges on owned home:
      - Paid on principal
      - Interest paid
      - Taxes
      - Assessments
      - Fire insurance
      - Repairs
      - Water rent
      - Carfare to and from work
      - Garden
      - Other
    - Rent charges on rented home:
      - Rent
      - Water rent
      - Repairs (not paid by owner)
      - Carfare to and from work
      - Garden
      - Other
  - Furniture and furnishings (per year):
    - Replacement and additions
    - Renovation and repairs
  - House operation (per month):
    - Light, heat and fuel
    - Telephone
    - Ice
    - Service
    - Cleaning supplies
    - House laundry and supplies
    - Garbage removal
    - Other
  - Recreation
    - Usual weekly expenditure:
      - Moving pictures
      - Theatre
      - Dances
      - Pool
      - Social clubs
      - Sports
      - Other
  - Special during year:
    - Social entertainment
    - Excursions
    - Vacation (out of city)
    - Other
  - Vehicles (per year)
    - Automobile:
      - Paid on initial expense
      - Insurance
      - Upkeep per month
    - Other
  - Education (per month):
    - School expenses:
      - Tuition
      - Books
      - Supplies
      - Other
    - Periodicals
    - Daily papers
    - Books
    - Lessons:
      - Music
      - Dancing
    - Other education expense
  - Investment and savings (per year):
    - Real estate
    - Stocks and bonds
    - Life insurance
    - Accident insurance
    - Savings
    - Other
  - Church (per year)
  - Charity (per year)
  - Health (per year)
    - Fees for regular physician
    - Fees for specialist
    - Drugs
    - Eyeglasses
    - Other
  - Organization dues (per month)
  - Tobacco (per week)
  - Miscellaneous (per month):
    - Other carfare
    - Moving
    - Lawyer fees
    - Funeral
    - Gifts
    - Barber
    - Other
  - Amount of surplus or deficit

TABLE 35: AVERAGE ABSOLUTE AND RELATIVE EXPENDITURES OF 82 TYPOGRAPHERS' FAMILIES IN SAN FRANCISCO

(Source: Heller Committee for Research in Social Economics, University of California)

Item	Amount	Per Cent of Total
Total expenditures	$2761.42	100.0
Food	879.14	31.8
Clothing	313.14	11.4
Shelter	421.56	15.3
House operation	260.71	9.4
Fuel and light	84.80	3.1
Furniture, furnishings	87.24	3.1
Service	17.19	0.6
Telephone	15.95	0.6
Other	55.53	2.0
Miscellaneous	886.87	32.1
Recreation	167.43	6.1
Union dues	146.61	5.3
Medical care	130.47	4.7
Savings, etc.	119.53	4.4
Vehicles	65.96	2.4
Education	57.96	2.1
Insurance	44.84	1.6
Tobacco	41.31	1.5
Church	11.69	0.4
Charity	9.62	0.3
Incidentals	91.45	3.3

TABLE 36: AVERAGE EXPENDITURES OF SPECIFIED NUMBER OF TYPOGRAPHERS' FAMILIES IN SAN FRANCISCO

(Source: Heller Committee for Research in Social Economics, University of California)

Item	Number of Families Reporting	Average Amount Spent
All items	82	$2761.42
Food	77	893.30
Clothing	69	350.97
Shelter	80	426.92
House operation	81	263.92
Total miscellaneous	82	886.87
Recreation	77	178.30
Automobiles	12	401.54
Education	73	65.11
Tobacco	57	59.43
Church	42	22.83
Charity	36	21.90
Medical care	74	143.22
Union dues	81	148.42
Investment	58	232.38
Incidentals	73	102.73

When the average expenditures of all of the 82 families are considered, the most important expenditure in the household budget was not for food, as might be expected, but for sundries, although the difference between the two is almost negligible, amounting to less than ½% of the total expenditures. The grouping of expenditures is somewhat different from that usually made, and therefore it may be misleading to compare the proportion of the expenditures of some of the other major items with the proportions given in other studies. "Shelter" in this study includes also such expenditures as carfare to and from work, costs of a garden, water and small repairs. Fuel and light is included under house operation, as are also some other items which are generally included under sundries or excluded altogether. These items are: furniture and furnishings, service, telephone and telegraph, laundry and laundry supplies, cleaning supplies, garbage removal, ice and "other" expenses. Expenditures for sundries are always of interest since they afford an insight into living standards. The extent to which the expenditures for the various items entered into the living cost of these families may be seen by the per cent of families that reported expenditures for the various items in the miscellaneous group. The percentages were as follows:

Union dues	100.0%	Investment[1]	76.8%
Recreation	95.1%	Church	54.9%
Medical care	91.5%	Charity	47.6%
Education	90.2%	Automobiles	20.7%
Tobacco	78.1%	Incidentals	95.1%

[1] Includes savings, insurance, etc.

The 100% union dues is of course explained by the fact that the investigation was conducted among members of the Typographical Union.

Professors at Yale University

A study which was not primarily a measurement of living costs but which offers some facts as to living standards was one made by a committee of the Yale Chapter of the American Association of University Professors.[1] The purpose of

[1] Committee on the Academic Standard of Living, appointed by the Yale University Chapter of the American Association of University Professors, "Incomes and Living Costs of a University Faculty," edited by Yandell Henderson and Maurice R. Davie. New Haven, Yale University Press, 1928.

Economic Level, Total Income, and Cost of Living	Salary	Mode of Living
$2,000	$1,800	"At this level even a man who has only himself to support is under pressure to supplement his salary by outside work. If $300 or $400 is spent on books, recreation, and travel he comes out at the end of the year about even or has an equal chance of a small surplus or deficit. "For a man and wife this level represents life at the cheapest and barest with nothing over for the emergencies of sickness or childbirth."
$2,500	$2,100	"For an unmarried man the pressure for supplementary earnings is not considerable. He is able to pay off debts previously incurred for education or to save $500 or sometimes even to go to Europe for the summer. "A man and wife must live with extreme frugality, and find work during the summer."
$3,000	$2,500	"For an unmarried man there is at this level no great surplus, but a comfortable life. "For a man and wife it is life on the simplest plane with little money for books and nothing for recreation or savings, other than $200 or $300 for insurance. All obtainable outside work for man or wife is welcome. Yet they may have a low-priced or second-hand car. "If a child is born the expense is $300 to $500 unless the wife goes to the public ward of the hospital. They live with the minimum of paid service, the wife doing all the cooking, washing, and housework, essentially as in the household of a mechanic, but with considerably greater expenses to keep up appearances."
$4,000	$3,000 to $3,500	"Most of the unmarried men at this level have cars or annual savings up to $1,500. One says that he 'lives comfortably and can waste money with impunity.' "The married men at this level are usually of assistant professor rank, often with families of young children. They must live with extreme economy in the cheapest obtainable apartment, borrowing to meet expenses of childbirth or sickness. The wife does all the cooking, housework, and laundry. As one man says: they 'economize until it hurts.' At about this level, if they live in the suburbs where rents are lower, they may have a car, which is practically a necessity though it also serves as a means of recreation."
$5,000	$3,500 to $4,000	"On this income the unmarried man lives without self-denial. He may go to Europe in the summer or have a surplus up to $2,000. "Married men with no children can live simply in a four- or five-room apartment in a good neighborhood. If the wife does all the housework they can save up to $800 or $1,000 in years when there is no sickness. "The men at this level are usually assistant or associate professors. If they have a wife and a couple of young children they must devote all their spare time and strength during the entire year to extra earnings. Even when the wife does all the housework they achieve nothing better than 'hand to mouth living' or, as another expresses it, they 'can afford almost no books, attend no professional gatherings unless close at hand. Cannot go

Economic Level, Total Income, and Cost of Living	Salary	Mode of Living
		to theater except in the gallery to look down on the students in the orchestra seats, where the teachers can not afford to sit.' "The needs of a growing family keep growing. At this level and upward many have cars, as the one means of pleasure for the whole family, and because it enables them to live where rents are lower."
$6,000	$4,000	"With further rise of income to this level the unmarried men, now in general nearing their fortieth year and in assistant or associate professor rank, allow themselves somewhat larger expenditures than before, but have a surplus for recreation, travel, or savings of about $2,000. "The married man with no children may at this level live simply, paying $1,200 a year rent for a five- or six-room apartment in a good neighborhood. If his wife does all the housework they may save $1,000; or they may have one regular servant (wages $600 to $850) and pay $250 to $500 yearly premiums for insurance. "At this level the family containing young children can 'barely break even' if the wife does all the housework. They often have, however, a cheap or moderate priced car. College vacations and all spare time are used for extra earnings."
$7,000	$4,500	"On rising to this level by promotion and increase of salary, unmarried men, and men with a wife but no children, add a little to regular expenditures. For the unmarried men any excess over $5,000 is available for the indulgence of taste in books, theaters, and travel, or for savings. For those married but childless the greater part of the excess over $6,000 is available for savings or the employment of a servant. "At this level the family containing two or three young children, or children of school age, can make ends meet only by keeping the expense for service as low as possible, although a few at this level begin to have a full-time servant. Usually the wife not only takes entire care of the children, but does the cooking and housework, and often also the washing and ironing (with electric machines bought on the installment plan), or contributes some supplementary earnings (up to $1,000) to the family budget. Such families often have a car, particularly if they live in the suburbs, but there is no indulgence in any other item not strictly necessary. Up to the ages common at this level the expenditure for education of children is not usually more than $100 or $200, as they are either too young to go to school, or are necessarily sent to the city schools. An associate professor living in this way says: 'The necessity of continually seeking outside work interferes with research. Interference with research means slower promotion. Slower promotion means more work outside to get a living.'"
$8,500	$3,000 to $8,000	"Families with one young child at this level generally have a full-time servant, and yet are able to show an annual surplus to meet emergencies up to $2,000. "The families of associate professors and the younger full

Economic Level, Total Income, and Cost of Living	Salary	Mode of Living
		professors at this level, with three children and school expense from nothing up to $1,000, may either have a full-time servant or spend only $200 to $400 for occasional service. They live on the edge of a deficit. Even a small insurance premium is paid with difficulty and the purchase of clothing is kept as low as possible. "Families with three children of preparatory school and college age at this level must generally maintain the 'mechanic type' of home. The wife does the housework with only partial and occasional hired help; and there is no surplus even when extreme economy is practiced. The expenses of the children at school or college, even when they contribute to their own support, absorb all funds over and above the sum essential to the maintenance of the home. Most of the men living in this way are full professors."
$10,000	$5,000 to $8,000	"In families at this level, if the children are not beyond school age and can therefore live at home, a servant may be employed, and a car may or may not be afforded. But there is, in addition, no money for relaxation, books, or vacations, nor a surplus to meet illness and other contingencies. If the children are of an age to be sent to boarding school or college, these expenses draw up to $3,000 out of the family budget, and the home expenses must be greatly curtailed."
$12,000	$5,000 to $10,000	"The men at this level are generally full professors fifty years of age or more, with twenty-five years of service behind them. They generally own their homes. During the decade while their children are going through preparatory school, college, and professional school, the educational expenses cut into the budget so that there is no surplus for emergencies, nor funds for secretarial service or books. Clothing is limited; often the life insurance that can be kept up is inadequate. As one man expresses it, he has been 'drained dry by the education of (his) children, although the wife and family have done most of the housework.'"
$10,000 to $16,000	$7,000 to $9,000	"The number of men able to live at this level is small. As nearly as can be estimated, if they own their homes they can spend $1,200 a year for service (one full-time servant plus part-time service); and the children can be sent to first-class preparatory schools and to college. During their time in college and professional school the children can have allowances enabling them to live on a par with the general run of students in this University."
$15,000 and over	$5,000 to $8,000	"This level permits the family to live comfortably but not extravagantly by New Haven standards, to travel and spend freely on theaters and recreation. "The education of children may run between $2,000 and $5,000, but the home is well maintained and there are two full-time servants and some other service.

the study was to find answers to two questions: (1) "What are the actual conditions of life which are faced by academic men when they attempt to live within their salaries, and to what degree are they compelled to supplement those salaries by outside work?" (2) . . . "what are reasonable economic and social standards with which academic salaries must comport, if men of high intellectual and moral quality are to be attracted into the career of teaching and scholarship . . . ?"

Questionnaires were sent to 433 members of the Yale faculty, 272 of whom replied. The questionnaires requested information on age, marital status, income and expenditures for housing, automobile, domestic service, education for children, traveling, association and club dues, vacation, savings and investments, annual surplus or deficit, health and professional expenses such as secretarial service, books, etc. Finally, a description was requested of the person's mode of living which the total expenditure provided. It will be noted, thus, that the information relating to expenditures which was asked for covered only two of the major items into which total living costs are generally divided, namely, housing and sundries.

On the basis of these returns, analyses were made of the economic levels of members of the Yale faculty, their modes of living and their expenditures. Of the data presented, those relating to the cost of various modes of living, although of a somewhat general nature, have a distinct bearing on the subject matter of this volume and are therefore reproduced in summary form on the preceding pages.

Farm Families in North Carolina

In the measurement of living costs of farm families, various problems are met which do not enter into cost of living measurements for other types of families. The difficulty lies in the fact that many of the commodities which other families have to purchase are obtained by the farmer from his farm. Generally, however, no records are kept of the amount or value of this consumption obtained from the farm.

A number of studies have been made to ascertain farm incomes and expenditures. In 1921 a cost of living series

was started in Livingston County, New York, which has been continued in other sections by the United States Department of Agriculture in cooperation with several state colleges of agriculture and universities. It is impossible to summarize all of those studies here. The results of a recent study are sufficient indication of the problems involved and the nature of the findings.

A survey of living conditions among white land owner operators in Wake County, North Carolina,[1] was made in the winter of 1926–1927. It covered 294 white families owning and operating farm land. Various interesting facts have been published as a result of this survey. From these the Conference Board has selected and reproduced below, either as published or with slight modification, those findings which are pertinent to farm living expenditures, particularly as affected by home production.

The following table shows the distribution of cash expenditures, both as to actual amounts and as percentages of the total. Food and fuel, it will be noted, play a relatively minor role in cash expenditures, since most of these commodities are produced on the farm.

TABLE 37: AVERAGE ABSOLUTE AND RELATIVE EXPENDITURES OF FARM FAMILIES IN NORTH CAROLINA

(Source: Agricultural Experiment Station of the North Carolina State College of Agriculture and Engineering, and North Carolina Department of Agriculture)

Items	Average Expenditure per Family	Per Cent of Total
Home and household	$174.00	16.5
Food and fuel	165.00	15.6
Health	82.00	7.8
Education	58.00	5.5
Insurance	34.00	3.3
Clothing	293.00	27.8
Reading	13.00	1.2
Personal	47.00	4.1
Automobile	133.00	12.6
Church and charity	50.00	4.7
Social activities and recreation	10.00	0.9
Total	$1,056.00	100.0

[1] North Carolina State College of Agriculture and Engineering and North Carolina Dept. of Agriculture, Agricultural Experiment Station, "Living Conditions among White Land Owner Operators in Wake County," June, 1928, Bulletin No. 258.

The extent to which home production influences the farmers' living costs may be seen in Table 38.

TABLE 38: VALUE OF FOOD AND FUEL PRODUCED ON FARM AND PURCHASED BY FARM FAMILIES IN NORTH CAROLINA

(Source: Agricultural Experiment Station of the North Carolina State College of Agriculture and Engineering and North Carolina Department of Agriculture. Computed by National Industrial Conference Board)

Item	Average Value of			Per Cent Produced	Per Cent Purchased
	Total Produced and Purchased	Total Produced	Total Purchased		
Groceries	$133.51	$1.98	$131.53	1.5	98.5
Meat	203.03	181.48	21.55	89.4	10.6
Lard	32.53	26.67	5.86	82.0	18.0
Milk and cream	167.19	166.61	0.58	99.6	0.4
Butter	55.74	54.87	0.87	98.4	1.6
Eggs	47.68	47.58	0.10	99.8	0.2
Fruit	32.32	31.24	1.08	96.6	3.4
Potatoes	51.47	51.18	0.29	99.4	0.6
Vegetables	96.09	96.01	0.08	99.9	0.1
Wood	81.23	80.76	0.47	99.4	0.6
Coal	1.50	..	1.50	..	100.0
All items	$902.29	$738.38	$163.91	81.8	18.2

Various Social Groups in Minnesota

A study showing differences in living costs among various social groups was made in 1927 by the Agricultural Experiment Station of the University of Minnesota.[1] This study is the result of a field survey among 395 families in eleven communities in Minnesota. These villages and towns ranged in size from 742 to 7,086 inhabitants. The persons surveyed were asked for information concerning their incomes and expenditures during the period from July, 1926 to July, 1927. Records were used wherever they had been kept, and a check was made in stores wherever possible and necessary.

Some of the results of this investigation relating to expenditures are presented in Table 39, which shows in absolute and relative figures the amounts spent for some of the major items and the total living expenses for each social group

[1] University of Minnesota, Agricultural Experiment Station, "Incomes and Expenditures of Village and Town Families in Minnesota," by Carle C. Zimmerman, Bulletin 253, March, 1929.

TABLE 39: AVERAGE INCOMES AND EXPENDITURES OF FAMILIES IN DIFFERENT SOCIAL GROUPS IN MINNESOTA

(Source: University of Minnesota, Agricultural Experiment Station. Arranged by National Industrial Conference Board)

Social Group	Average Income per Family	Absolute Expenditures								Relative Expenditures (Per Cent)							
		Household	Food	Clothing	Health	Other Living	Automobiles	Investments	Total Expenditures	Household	Food	Clothing	Health	Other Living	Automobiles	Investments	Total Expenditures
Common labor	$900	$221	$397	$125	$43	$85	$30	$60	$961	23	41	13	5	9	3	6	100
Widows and spinsters	948	374	400	86	38	76	10	137	1,121	33	36	8	3	7	1	12	100
Retired farmers	1,318	578	342	175	100	162	63	347	1,767	33	19	10	6	9	3	20	100
Semi-skilled labor	1,496	391	486	193	66	137	70	209	1,552	25	31	13	4	9	5	13	100
Skilled labor	1,879	472	525	230	123	169	110	314	1,943	24	27	12	6	9	6	16	100
Lower business	1,949	451	476	241	72	186	127	433	1,986	23	24	12	4	9	6	22	100
Lower professional	2,377	465	528	283	70	383	264	506	2,499	19	21	11	3	15	11	20	100
Clerical or managerial labor	2,653	751	575	344	107	311	314	508	2,910	26	20	12	3	11	11	17	100
Upper business	5,332	1,091	590	405	121	514	468	2,185	5,374	20	11	7	2	10	9	41	100
Upper professional	5,698	1,133	729	632	167	683	657	1,591	5,592	20	13	11	3	12	12	29	100
Average of all groups	$2,347	$582	$505	$267	$90	$253	$201	$575	$2,473	24	20	11	4	10	8	23	100

TABLE 40: AVERAGE EXPENDITURES OF MINNESOTA FARM FAMILIES ACCORDING TO CASH RECEIPTS, BY MAJOR ITEMS

(Source: University of Minnesota, Agricultural Experiment Station)

Amount of Cash Receipts	Absolute Expenditures							Relative Expenditures (Per Cent)						
	Total Expenditures	Food	Clothing	Household	Health	Advancement	Personal	Total Expenditures	Food	Clothing	Household	Health	Advancement	Personal
$500 or less	$500	$183	$97	$162	$15	$23	$19	100.0	36.7	19.3	32.4	3.1	4.7	3.8
501–$1,000	561	225	126	83	55	38	34	100.0	40.1	22.5	14.8	9.8	6.8	6.0
1,001– 1,500	639	234	137	106	62	59	40	100.0	36.7	21.5	16.5	9.7	9.3	6.3
1,501– 2,000	716	261	178	120	47	61	48	100.0	36.6	25.0	16.6	6.6	8.5	6.7
2,001– 2,500	850	273	196	164	79	87	52	100.0	32.1	23.2	19.3	9.3	10.0	6.1
2,501– 3,000	914	292	209	184	63	110	57	100.0	31.9	22.9	20.1	6.9	12.0	6.2
3,001– 3,500	1,051	303	234	195	93	152	74	100.0	28.8	22.3	18.6	8.8	14.4	7.1
3,501– 4,000	1,083	313	241	193	129	138	69	100.0	28.9	22.3	17.8	11.9	12.8	6.3
4,001– 4,500	1,053	336	282	183	106	92	56	100.0	31.9	26.8	17.3	10.0	8.7	5.3
4,501– 5,000	1,159	330	266	251	78	165	69	100.0	28.5	23.0	21.6	6.7	14.2	6.0
5,001– 5,500	1,319	373	334	243	197	102	70	100.0	28.4	25.3	18.4	14.9	7.7	5.3
5,501– 6,000	1,432	411	305	395	36	209	77	100.0	28.7	21.3	27.5	2.5	14.6	5.4
6,001– 6,500	1,098	316	199	247	64	127	146	100.0	28.8	18.1	22.5	5.8	11.5	13.3
6,501 or more	1,362	364	280	380	120	137	83	100.0	26.8	20.6	27.8	8.8	10.0	6.0
Average of all groups	$867	$279	$198	$169	$75	$92	$54	100.0	32.2	22.8	19.5	8.7	10.6	6.2

surveyed. For each group the average income per family is also given in order to afford an indication of the relation of income levels to expenditures. This study too is further evidence of the fact that the relative amount spent for food decreases as the income increases and the expenditures for sundries increase.

In connection with this survey may be cited another made by the same authorities into farm family incomes and expenditures.[1] This study was made in 1926 and covered 334 farmers in six communities in Minnesota. Table 40 presents average expenditures for the major groups of items and total living expenditures, in absolute and relative figures, for various groups classified according to the amount of cash receipts.

[1] *Ibid.*, "Factors Affecting Expenditures of Farm Family Incomes in Minnesota," by Carle C. Zimmerman and John D. Black, Bulletin 246, July, 1928. Previous studies of the same type are contained in Bulletins 234 and 240.

CONCLUSION

THE effort to bring the cost of living within the field of systematic knowledge has given rise to many studies which, though kindred and pursued along essentially similar lines, concern different aspects of the subject. The first of these is the endeavor to ascertain through the examination of their expenditures how people live when they have different incomes and different social surroundings. A second aspect is the cost of living in different localities for persons who live in substantially the same manner. Finally, a third group of studies deals with the cost of living at different times for persons who live in a similar manner and in the same locality. In more technical terms, these studies have to do with class investigations, place investigations, and time investigations.

While investigations of the way in which people live—the standard of living—have on the whole been less comprehensive and perhaps less satisfactory in their results than the other forms of investigation, such inquiries are fundamental to the other two. If one seeks to compare the cost of living from place to place or from one period to another, it is implied that these costs refer to some more or less well-defined standard of living. The one usually chosen is that of the urban industrial wage earners, partly because of the public interest in the welfare of this group in the population, and partly because their household expenditures are more nearly standardized than those of other groups.

The introductory discussion of the problems surrounding the different types of investigation and the explanation of what they have in common and wherein they differ is a convenient preliminary to an exposition of the studies of the National Industrial Conference Board in this field. So far as the problems of the cost of living concern a time series, they are set forth concretely in the study of the methods of the National Industrial Conference Board in determining changes in the cost of living. If, in general, the problem

seems comparatively simple, this statement of methods will indicate the innumerable questions of detail which call for consideration, and the mature judgment which is required to secure a satisfactory adjustment of the problems which they present.

The effort of the National Industrial Conference Board in its investigations has been to show the changes which have taken place since 1914 in the cost of a given standard of living, representing that of the industrial wage earner before the World War. The present volume contains the results of these inquiries to the end of 1929. The early part of the period reviewed witnessed violent changes. Prices of commodities, and with them the cost of living, mounted rapidly to a maximum in 1920. The rise in the cost of living was not so great, however, as that in the wholesale prices of commodities. In the cost of living one deals with retail prices, and these, as is well known, do not fluctuate in the same degree as corresponding wholesale prices. They neither rise so high when the movement is upward, nor fall so low when it is downward. Moreover, the cost of living is not made up entirely of the purchase of commodities but involves expenditures for various forms of service, among which rent might be included, which are not so susceptible to current price movements as are commodities.

When in the latter part of 1921 a drop occurred in the cost of living, the same conditions restrained the fall from being so great as in the case of wholesale prices. After the low point in the cost of living was reached in 1922 there was a moderate increase in cost until the third quarter of 1925. Since that date there has been an equally moderate decrease in the cost of living which has continued into the first months of the year 1930. The movement here traced in outline for the general cost of living has been followed, with considerable variation in detail, by each of the major items of family expenditure and by some of the component parts of these items. These movements have been set forth in detail, with numerous tables and appropriate charts, in the foregoing pages.

In addition to the detailed treatment of the index compiled by the National Industrial Conference Board which

forms the body of this volume, some account has been given of other current indexes and recent studies relating to the cost of living. The purpose has been not to present a complete summary of studies undertaken in this field but to give a number of illustrations to show how the problems inherent in studies of the cost of living are met by various investigators, and what results have been secured.

Besides the index computed by the National Industrial Conference Board, two other time series of the cost of living are regarded as authoritative. One of these, published every six months by the United States Bureau of Labor Statistics, refers to the cost of living in fifty-one cities throughout the United States; the other, issued monthly by the Massachusetts Special Commission on the Necessaries of Life, refers to the state of Massachusetts only. Although the three series differ somewhat in scope and in the localities to which they refer, the general trend of the indexes computed is strikingly similar. That there should be minor differences both in the amount of change recorded and in the general level in comparison with the basic date is to be expected.

A series of studies which bring out the variations in the cost of living in different localities for persons living at the same general standard is also noted. These studies indicate that the differences between places are more marked in such items of expenditure as rent and fuel and some of the sundry expenditures, that they are less marked in clothing and that they are at a minimum in the case of food. Such differences as are observed may offset one another so that the total costs of living do not vary so much as one might be led to expect from observing casually only one of the major items of expenditure.

Studies of differences in the cost of living for various groups of persons show that expenditures differ widely both in the kinds of commodities and services purchased and in the relative proportion of the total income which is spent for the major groups of items. In general, the higher the income, the less the proportion spent for food and the greater the proportion spent for sundries, or in other words, for commodities and services which are not primary necessities.

In recent budget studies relating to wage earners, it is

manifest that a greater variety of commodities and services in the sundries group are purchased by these families now than before the World War, and that a larger proportion of the total household expenditure is devoted to such purposes. This leads to the hope that the necessary funds will be available in the near future for some central authority to make a nation-wide study of the present family expenditures of wage earners, in order that the results may give a more adequate basis than is now available for the computation of index numbers of the cost of living.

APPENDIX

MONTHLY INDEX NUMBERS, 1920–1925

The process of making up the cost of living index numbers of the National Industrial Conference Board, described in detail in Chapter II, relates to the comprehensive data collected in the earlier period only three times a year, in March, July and November. In addition to these numbers from January, 1920 to October, 1925, the Board also assembled information for intermediate months on a somewhat more limited basis as regards sources of information. The index numbers computed on the basis of this information are found in Table 41. The basic budget and the method of collecting and combining current price data are identical with those for the more comprehensive surveys.

These monthly reports were started at a time when prices were changing very rapidly, and have always been considered in the nature of interim estimates indicative of tendencies rather than as definite measurements. As a matter of fact, however, experience with these monthly estimates indicates that for the budget as a whole the figures give a very fair measure of the trend in the cost of living in those months when complete reports are not available. For the separate items, the numbers have not had the same validity. Since November, 1925, the monthly calculations of the index number have been upon the comprehensive basis described in Chapter II of this volume.

TABLE 41: INDEXES OF THE COST OF LIVING IN THE UNITED STATES, ON SPECIFIED DATES, JANUARY, 1920 TO OCTOBER, 1925, BY MAJOR ITEMS[1]

Base, July, 1914 = 100

(Source: National Industrial Conference Board)

Date	All Items	Food	Housing	Clothing	Fuel and Light	Sundries	Date	All Items	Food	Housing	Clothing	Fuel and Light	Sundries
1920							1923						
January..	192.0	201	143	270	149	177	January..	158.1	144	167	160	187	171
February.	193.1	200	145	277	149	178	February.	157.5	142	167	162	187	171
April.....	201.3	211	150	288	151	183	April.....	159.1	143	170	167	180	173
May.....	203.3	215	151	287	155	183	May.....	160.3	143	172	174	178	173
June.....	204.3	219	151	276	161	185	June.....	160.1	144	172	169	178	173
August...	198.0	207	158	255	169	185	August...	161.6	146	175	171	176	173
September	197.6	203	159	255	178	188	September	163.4	149	175	175	176	173
October..	195.2	198	159	248	183	190	October..	164.1	150	175	176	178	173
December	183.5	178	166	205	200	192	December	165.0	150	180	175	176	174
1921							1924						
January..	178.6	172	166	187	200	192	January..	164.6	149	180	176	175	174
February.	170.3	158	166	174	198	190	February.	163.9	147	180	177	175	174
April.....	165.9	152	171	169	179	185	April.....	161.8	141	185	177	168	174
May.....	162.6	145	171	168	178	185	May.....	161.4	141	185	176	165	174
June.....	161.4	144	171	162	178	185	June.....	161.7	142	185	174	165	174
August...	165.1	155	169	159	179	183	August...	162.8	144	186	176	166	173
September	163.9	153	169	157	179	183	September	163.7	147	185	174	166	173
October..	163.7	153	169	160	179	180	October..	165.0	149	185	177	167	173
December	161.6	150	169	157	179	178	December	166.1	152	184	173	169	175
1922							1925						
January..	158.0	142	169	156	178	178	January..	167.1	154	184	174	169	175
February.	157.7	142	169	156	177	177	February.	165.3	151	183	172	169	175
April.....	154.8	139	165	155	174	174	April.....	164.8	151	182	171	165	175
May.....	154.9	139	165	156	174	174	May.....	165.3	152	182	172	163	175
June.....	155.4	141	165	153	174	174	June.....	166.9	155	182	174	164	175
August...	154.5	139	165	153	181	172	August...	168.7	160	179	175	166	175
September	155.6	140	165	155	187	172	September	168.2	159	178	176	168	174
October..	157.1	143	165	157	187	172	October..	169.7	162	178	176	170	174
December	158.9	147	167	156	187	171							

[1] See p. 189 of this volume for explanations of these figures, and see Table 6, p. 64, for indexes based on comprehensive investigations. The index numbers for the total cost of living from January, 1920 through February, 1922 are different from the series published prior to 1925 in that the food price figure for the fifteenth of the current month has been substituted for the figure for the fifteenth of the preceding month, used in the original series. Beginning in April, 1922, the retail food price figure has always been for the fifteenth of the current month.